

A Comparative Analysis of Conjunctions in Ph.D. Dissertations by Spanish, Turkish, and English Researchers

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Abstract

In academic writing, conjunctions are crucial because they promote coherence, cohesion, and logical connections between ideas. The current study scrutinizes the frequencies of the ten most widespread B2 level conjunctions in the British Academic Written English Corpus as found in published PhD theses written in the English Language Teaching field by native English, native Turkish, and native Spanish researchers. The aim of this comparative study is to learn more about the similarities and differences in conjunction usage among researchers with various linguistic backgrounds. The comparison of English language users with Turkish and Spanish researchers is a novel feature of this study. A plausible dataset of published PhD dissertations was subjected to a corpus-based analysis in order to identify and quantify the frequencies of the target conjunctions. The results of this study offer insightful information on how researchers with various linguistic backgrounds use conjunctions at the B2 level in academic writing. The findings aid in the comprehension of language transfer effects and could provide researchers and language educators with information on potential language-specific difficulties faced by non-native English speakers while writing academically. The study also gives information on how native language influences conjunction usage, laying the groundwork for future studies in contrastive linguistics and second language teaching.

Keywords: Corpus-based analysis, conjunctions, English Language Teaching, contrastive linguistics, academic writing

İspanyol, Türk ve İngiliz Araştırmacıların Doktora Tezlerindeki Bağlaçların Karşılaştırmalı Analizi

Öz

Akademik yazımda, bağlaçlar, fikirler arasındaki tutarlılığı, bütünlüğü ve mantıksal bağlantıları destekledikleri için çok önemlidir. Bu çalışma, İngiliz Dili Eğitimi (ELT) alanında anadili İngilizce, Türkçe ve İspanyolca olan araştırmacılar tarafından yazılmış doktora tezlerinde bulunan İngiliz Akademik Yazılı İngilizce Derlemindeki (BAWE) en yaygın on B2 seviyesi bağlaçların frekanslarını incelemektedir. Bu karşılaştırmalı çalışmanın amacı, farklı dilsel geçmişlere sahip araştırmacılar arasında bağlaç kullanımındaki benzerlikler ve farklılıklar hakkında daha fazla bilgi edinmektir. İngiliz dil kullanıcılarının Türk ve İspanyol araştırmacılarla karşılaştırılması bu çalışmanın alana önemli bir katkısıdır. Yayınlanmış doktora tezlerinden oluşan makul bir veri kümesi, hedef bağlaçların kullanım sıklıklarını belirlemek ve ölçmek için derlem tabanlı bir analize tabi tutulmuştur. Bu çalışmanın sonuçları, farklı dilsel geçmişlere sahip araştırmacıların akademik yazımda B2 düzeyinde bağlaçları nasıl kullandıklarına dair aydınlatıcı bilgiler sunmaktadır. Bulgular, dil transferi etkilerinin anlaşılmasına yardımcı olurken, araştırmacılara ve dil eğitimcilerine, ana dili İngilizce olmayanların akademik yazım sırasında karşılaştıkları dile özgü olası zorluklar hakkında bilgi sağlayabilir. Çalışma aynı zamanda anadilin bağlaç kullanımını nasıl etkilediğine dair bilgi vererek karşılaştırmalı dilbilim ve ikinci dil öğretimi alanlarında yapılacak çalışmalara zemin hazırlamaktadır.

Anahtar kelimeler: Derlem tabanlı analiz, bağlaçlar, İngilizce öğretimi, karşılaştırmalı dilbilim, akademik yazma

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INTRODUCTION

With the advancement of technology and computer use, a number of academics have made significant use of corpus-based studies in recent years. A structured collection of written or spoken texts for qualitative and quantitative studies is referred to as a corpus (Biber, Conrad, & Reppen, 1998). Corpus linguistic techniques are used to evaluate and grasp the frequency and usage of linguistic characteristics to determine how they are utilized in the corpus under consideration. Utilizing corpora offers the chance to examine organically occurring language in texts, which is one of its benefits. Additionally, researchers can overcome subjective reflection, limited knowledge, and preconceived notions with the aid of corpora by moving beyond obvious linguistic trends and noted traits (Mehl, 2016). Along with linguistic analyses, corpus studies also aid in the study of foreign and second languages through data-driven activities that build students' learning skills and give them access to relevant and real-world language data (Trebits, 2009). Additionally, concordance software enables students to recognize linguistic trends (Hunston, 1995). In any case, corpus-based studies will show researchers, teachers, and students new avenues for learning more about the language(s) under a microscope.

Researchers have discovered a chance to identify trends in language use in spoken and written texts through the study of corpora. A number of studies (Ädel & Erman, 2012; Byrd & Coxhead, 2010; Chen & Baker, 2010; Conrad & Biber, 2005; Nesi & Basturkmen, 2006; O'Flynn, 2022; Öztürk & Durmuşoğlu-Köse, 2016) have concentrated on the use of lexical bundles in English in academic writing. Contrarily, there are numerous corpus-based research on conjunction usage. One of these studies, conducted by Trebits (2009), uses the British National Corpus (BNC) database to examine the use of conjunctions in texts connected to the EU texts written in general English. Many other studies have also questioned the usage of conjunctions by non-native English speakers in academic contexts, such as in their theses and/or research publications (Granger & Tyson, 1996; Martin, 2003; Paltridge, 1995; Zhao, 2011; Zou, 2015). The majority of this research concentrates on English learners from China or Japan. To our knowledge, Coşkun's (2011) study, in which he contrasts Uzbek and Turkish learners and their employment of cohesive devices in writing, is the only research work that focuses on Turkish learners of English in terms of their use of conjunctions. In light of this, it is necessary to look into the use of conjunctions and the degree to which non-native researchers use them on par with native researchers, as it is crucial for non-native writers to sound as native in their dissertations as possible (Pallotti, 2009).

The present study delves into the role of conjunctions in academic writing, focusing on the frequencies of the ten most prevalent B2 level conjunctions in the British Academic Written English Corpus (BAWE). The research focuses on PhD theses from researchers of diverse linguistic backgrounds, including L1 English, L1 Turkish, and L1 Spanish. The methodological approach involves a corpus-based analysis, identifying and quantifying the frequencies of target conjunctions.

To frame this research theoretically, “usage-based linguistics” provides a comprehensive aspect by exploring the significance of the role of frequency in language use. In usage-based linguistics, which is grounded in the role of language use in creating linguistic knowledge, the position is that all linguistic structures are functions of language use, and thus represented in the mind as constructions (Bybee, 2008; Diessel, 2017). Therefore, higher frequency constructions will be more quickly processed and will have a greater impact on linguistic knowledge, which is observed both in native and non-native language users. Similarly, the “constructionist approach” emphasizes how to learn and use linguistic constructions in diverse contexts (Ellis, 2006; Gries & Ellis, 2015), and how crucial to analyze conjunction use in varied linguistic backgrounds is (Goldberg, 2006).

In the present study, these two frameworks are combined to outline conjunction usage and explain it within the general framework of language acquisition, as suggested by the usage-based theory. This approach will increase sensitivity to the process of how L2 English speakers acquire and use linguistic structures, thereby providing both theoretical enrichment and better practical applications in language pedagogy. The study aims to examine whether the frequency of conjunction use differs in academic writing, specifically whether the given frequencies stay constant with general patterns of use found in the BAWE corpus and how L1 English, L1 Turkish, and L1 Spanish researchers compare.

The findings provide valuable insights into the usage of conjunctions by researchers from different linguistic backgrounds, enhancing language transfer effects and addressing language-specific challenges faced by non-native English speakers. The study also highlights the influence of native language on conjunction usage, offering theoretical and practical advancements in academic writing and language pedagogy. More specifically, according to Gries and Ellis (2015), the hierarchical organization in a network of linguistic knowledge means that conjunctions, like any other constructions, are acquired and used as a function of their frequency and the contexts of their occurrence. In this regard, the current study seeks to identify the ten CEFR (Common European Framework

of Reference for Languages)-B2-level conjunctions most frequently employed by L1 English, L1 Turkish, and L1 Spanish scholars in their PhD dissertations in the subject of English Language Teaching (ELT). This will be a unique study to compare English language users with Turkish and Spanish, two non-native English speaker groups, both among themselves and with a group of native English speakers. The research questions listed below will be put out in order to fully describe the investigation:

1. What are the frequencies of the ten most frequent B2 level conjunctions in the British Academic Written English Corpus (BAWE) as a reference corpus?
2. How do these frequencies compare to the conjunctive preferences of L1 English, L1 Turkish, and L1 Spanish researchers in the field of ELT as observed in published PhD Dissertations?
3. Do the frequencies of these conjunctions differ significantly between:
 - a. Turkish and Spanish authors' corpora?
 - b. Turkish and English authors' corpora?
 - c. Spanish and English authors' corpora?

Overall, the current study will unearth subtle insights into conjunction use in academic writing through an application of a usage-based linguistic framework. The findings generate better views on how conjunctions are used by scholars from different linguistic backgrounds, increasing our realization of the effects of language transfer and challenges specific to a language for speakers of English as a non-native language. The findings also prove instrumental in developing effective language teaching strategies and assisting non-native speakers in overcoming language-specific pitfalls in academic writing.

LITERATURE REVIEW

Corpus Studies Among Different Language Variables

Although corpus-based research has spread internationally in recent years, the corpus most frequently compared to other corpora or to itself has primarily been the corpus of native English speakers. Many researchers have developed an interest in how non-native speakers of English use the language and the differences between their use and that of native speakers in a particular linguistic item after noticing the research gap between native and non-native speakers of English. In addition to studies on learner corpora, several scholars have focused on academic corpora, or how non-native English speakers use the language in their dissertations and/or research publications (Kuswoyo et al., 2020; Ucar, 2017).

The usage of lexical bundles in various linguistic variables has been the main focus of the majority of corpus-based studies. As is acknowledged, lexical bundles are an essential resource in determining academic discourse because the successful use of lexical bundles is vital for writers in order to sound fluent and native-like (Öztürk & Durmuşoğlu-Köse, 2016). Some of recent studies (Ädel & Erman, 2012; Chen & Baker, 2010) claim that non-native writers of English produce less varied lexical bundles and overuse some of them compared to native writers of English. In this regard, numerous studies (Ädel & Erman, 2012; Byrd & Coxhead, 2010; Chen & Baker, 2010; Conrad & Biber, 2005; Nesi & Basturkmen, 2006; O'Flynn, 2022; Öztürk & Durmuşoğlu-Köse, 2016) have tried to identify the frequency of using lexical bundles in different language variables and examine to what extent non-native writers of English sound native-like in their writings in terms of lexical bundles use.

The Use of Conjunctions in Academic Writing Among Different Language Variables

A conjunction is a word that joins sentences or groups words together in a sentence. Conjunctions serve as a semantic link between two ideas, and it is necessary to comprehend the first notion before using conjunctions to interpret the second (Halliday & Hasan, 1976). Conjunctions have a significant role in achieving coherence and cohesion, two of the most important aspects of academic writing. The former emphasizes connections at the argument level, while the latter emphasizes connections at the sentence level. Conjunctions can wholly or partially change the meaning if they are not employed in a way that promotes coherence and/or cohesiveness. Thus, it is crucial for speakers of a foreign language to be familiar with and employ the majority of conjunctions, if not all of them, in suitable contexts. It is considerably more important for academic researchers who are writing a dissertation and/or a research article in a foreign language to have mastered the right uses of conjunctions because academic writing calls for a far more thorough and advanced linguistic use of the language.

Though there has been some research on the use of English conjunctions, many studies have mostly concentrated on native English speakers (Christie & Derewianka, 2008; Diessel, 2004; Schleppegrell, 2004)

specifically focusing on how youngsters learn conjunctions rather than how adults use them in that language. Because adults may weigh causes and present arguments for and against diverse perspectives, academic academics who are by nature adults were chosen for this study (Slobin, 1996). Granger and Tyson (1996) conducted one of the earliest studies on the use of conjunctions by native and non-native speakers, and their initial premise was that L1 English speakers tend to overuse, and L2 English speakers tend to underuse specific conjunctions in their essays. Although the qualitative study demonstrated that there are semantic, stylistic, and syntactic errors between these two groups of English speakers, the quantitative analysis demonstrated that the hypothesis was incorrect. Martin (2003) performed a genre analysis on Spanish and English research article abstracts, the two languages that make up two of the three variables in the present study. He discovered rhetorical factors in both of these linguistic variables and connected these variations to the various demands placed on Spanish and English writers. Michel (2013), one of the researchers to work on a spoken corpus in this area, compared the use of conjunctions by native and non-native English speakers in cognitively simple versus complex oral tasks and tested the Cognition Hypothesis (Robinson, 2007) on a potential difference between these two groups, but she was unable to find a statistically significant difference between the two groups.

There is a dearth of research that compares how pre-determined conjunctions are used by English-speaking writers who are native speakers and non-native speakers in academic writing. The research focuses on conjunctions at the B2 level because this level denotes a high proficiency where learners can comfortably interact with native speakers, demonstrating a level of language competency that reduces stress during communication for both the learner and the native speaker. Below this level of proficiency is mostly limited to daily interactions rather than academic writing (Council of Europe, 2001).

METHOD

The study uses a corpus-based research design, employing the AntConc software, which enables a thorough investigation of the frequencies of B2 level conjunctions in published PhD dissertations written by academics with L1 English, L1 Turkish, and L1 Spanish backgrounds in the ELT area.

Research Corpus

The three independent corpora employed in this study were drawn from 20 L2 English Ph.D. dissertations by Turkish writers, 20 L2 English Ph.D. dissertations by Spanish authors, and 20 L1 Ph.D. dissertations by English native speakers working in the ELT area. The primary justification for selecting doctoral theses is that it is assumed that English writers at the doctoral level have a high degree of proficiency in the language and have likely produced several research articles, making them knowledgeable in conjunction usage.

Dissertations from the ELT field were chosen not only because it is the researcher's field and she is interested in seeing how her colleagues use conjunctions, but also because it is important to maintain field consistency when choosing the theses in order to avoid any misjudgments brought on using conjunctions in various fields. To maintain relevance to contemporary academic standards and research interests, the study focuses on recent theses from 2014. Moreover, methodological consistency is ensured, and biases are prevented by using a constant time frame. For the purpose of gathering and analyzing data, it is feasible to examine theses from more recent times. Concentrating on current theses, in addition, helps the readers better understand the evolution of academic discourse in the selected study area and identify shifts in theoretical frameworks, research goals, and social significance.

Turkish writers' theses were acquired from the Turkish Council of Higher Education Thesis Center's official website at <https://tez.yok.gov.tr/UlusalTezMerkezi/giris.jsp>. Then, from an official website (<https://dialnet.unirioja.es/tesis>), which contains Ph.D. dissertations from 40 Spanish universities, the theses written by Spanish authors were taken. The final step was to retrieve the theses authored by English native speakers from ProQuest, a database of dissertations and theses (<http://search.proquest.com/pqdtglobal?accountid=11248>).

Descriptive Statistics of the Corpus

After the theses were downloaded, they were uploaded into the software AntConc 3.4.4.m. The descriptive data for each corpus used in this investigation are shown below.

Table 1. AntConc 3.4.4.m Statistics

	L1 Turkish, English authors	L2 L1 Spanish, English authors	L2 L1 English authors
Tokens (running words) in text	1053146	2225685	996203
Types (distinct words)	27427	45093	22528

As can be seen from Table 1, the total tokens of Turkish and L1 English authors' corpora are close to each other in terms of number, whereas the Spanish authors' corpus almost doubles both corpora in terms of tokens and types. In order to avoid the issues that can arise from this huge difference in the number of tokens between the Spanish authors' corpus and the others, the log-likelihood and effect size calculator (<http://ucrel.lancs.ac.uk/llwizard.html>) was used.

Identifying Conjunctions

After the preliminary analyses, the BAWE Corpus was uploaded to the program AntConc 3.4.4.m, where a frequency analysis was conducted to arrange the words according to how frequently they appeared throughout the entire corpus. The researcher then used the Cambridge Dictionaries Online website (<http://dictionary.cambridge.org>) to manually choose the conjunctions starting at the top of the frequency list and determine where those conjunctions belonged in the CEFR.

Frequency Analysis

After the most frequently used ten CEFR-B2-level conjunctions in the BAWE Corpus were determined, the second phase of the study was conducted and frequencies both within and across the three language variables were analyzed. Determining whether a conjunction is overused or underused usually entails statistical analysis that compares the conjunction's frequency in one corpus (e.g., L1 Turkish writers' theses) with another corpus (e.g., L1 Spanish authors' theses). The functions of the conjunctions were examined as the third step following the frequency analysis, paying particular attention to those that could have more than one function or a different function when used with another word (for example, the conjunction *though* changes its function when the word *as* is preceding it). The data were removed from uses that did not fulfil the primary purpose of the conjuncts in question.

FINDINGS

The results revealed that the most frequent ten conjunctions at B2 level according to CEFR in BAWE Corpus are *thus*, *though*, *furthermore*, *as a result of*, *whereas*, *moreover*, *consequently*, *nevertheless*, *additionally*, and *in conclusion*; starting from the most frequent. Table 2 below shows the rank and frequency of these conjunctions in BAWE Corpus.

Table 2. Rank and Frequency of the Conjunctions Used in the Study

	Rank	Frequency
thus	133	4483
though	345	2035
furthermore	607	1317
as a result of	733	466
whereas	757	1081
moreover	772	1060
consequently	1011	807
nevertheless	1339	599
additionally	2141	359
in conclusion	726638	427

The Rank and Frequency Statistics of Conjunctions in Each Corpus

The first research question tries to find out the frequencies of the most frequent ten B2-level conjunctions according to BAWE Corpus in PhD theses written by English, Turkish, and Spanish researchers. After the conjunctions in question were finalized, a word search in the AntConc 3.4.4.m software was computed for each language and the rank and frequency of each conjunction in each corpus were found. Figure 1 shows the frequency statistics of the conjunctions in each corpus in a general view.

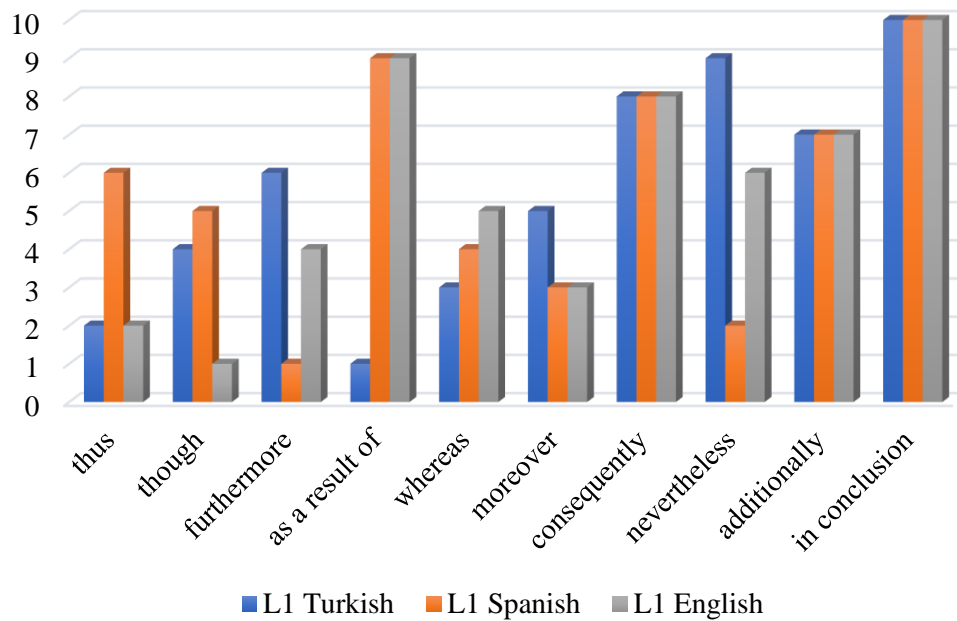


Figure 1. The rank statistics of conjunctions in each corpus

As seen in Figure 1, the use of conjunctions in native and non-native languages varies although there is no difference in the frequency of some conjunctions such as *consequently*, *additionally*, and *in conclusion* across three languages. After this overall evaluation, Table 3 shows the statistics for each language variable in detail to answer the second research question concerning how these frequencies compare to the conjunctive preferences of L1 English, L1 Turkish, and L1 Spanish researchers in ELT as observed in published PhD dissertations.

Table 3. The Rank and Frequency Statistics of Conjunctions in Each Corpus

	L1 Turkish, L2 English authors' corpus		L1 Spanish, L2 English authors' corpus		L1 English authors' corpus	
	Rank	Frequency	Rank	Frequency	Rank	Frequency
<i>Conjunction</i>						
thus	276	530	1235	40706	431	324
though	734	200	625	485	407	337
furthermore	1146	119	296	16686	788	178
as a result of	5	193	176743	83	81943	49
whereas	651	222	465	44046	1020	133
moreover	779	186	361	26344	750	185
consequently	1881	60	8239	154	1854	61
nevertheless	2213	47	307	27294	1306	98
additionally	1684	71	1524	180	1719	67
in conclusion	122569	39	247110	28	124823	4

The reference conjunctions could, at this point, be ranked according to the frequency with which they appear in each corpus, as shown in Table 3. In order to determine whether there are any parallels or differences, we will score the conjunctions from one to ten in descending order, with one being the most frequently used CEFR-B2-level conjunction and ten being the least frequently used.

The Frequencies of the Conjunctions Across Three Language Variables

The third research question examines whether the use of conjunctions differs significantly across the PhD dissertations written by L1 Turkish, L1 Spanish, and L1 English researchers. In this respect, first, the ranks of the conjunctions in each corpus were described. The ranks of the conjunctions in three different corpora are displayed in Table 4.

Table 4. Ranks of the Conjunctions in Each Corpus (one shows the most frequent whereas ten shows the least frequent)

	L1 Turkish, L2 English authors' corpus	L1 Spanish, L2 English authors' corpus	L1 English authors' corpus
<i>Conjunction</i>	<i>Rank</i>	<i>Rank</i>	<i>Rank</i>
thus	2	6	2
though	4	5	1
furthermore	6	1	4
as a result of	1	9	9
whereas	3	4	5
moreover	5	3	3
consequently	8	8	8
nevertheless	9	2	6
additionally	7	7	7
in conclusion	10	10	10

Three conjunctions are ranked the same in all three corpora, as seen in Table 4: *additionally*, ranking seventh; *consequently*, ranking eighth; and *in conclusion*, ranking tenth. Additionally, Rayson's online calculator was utilized to see statistical differentiation between the conjunction frequency in each corpus. In this analysis, the Bayes Factor and Effect Size for Log-likelihood (ELL) are taken into account. The assumption that two words to be evaluated are used at non-significantly different rates in two corpora is the null hypothesis in this calculation (Wilson, 2013). This null hypothesis is stronger the further the Bayes Factor deviates from the point of 2. If so, there would be no use in considering ELL. The ELL, however, becomes significant when the Bayes Factor is greater than 2 because it establishes the magnitude of the statistical difference between the two words under study.

Comparison between Turkish and Spanish Authors' Corpora

To examine the conjunctions employed in two non-native authors' PhD theses in the field of ELT, the researcher compared their corpora. Since English is a language that neither the Spanish nor the Turkish researchers are native speakers of, it was expected that there would be some overlap between these two corpora in terms of the frequency of conjunctions employed in academic writing. Although there were some variances in the frequency of the other conjunctions as being over- and underused, the researcher discovered parallels in the use of *though*, *consequently*, and *additionally*. The comparison of the corpora of Turkish and Spanish authors is seen in Table 5.

Table 5. Statistical Significance (L1 Turkish relative to L1 Spanish) (O = Overuse, U = Underuse)

Conjunction	p < 0.05	p < 0.01	p < 0.001	p < 0.0001
thus			U	
though				
furthermore			U	
as a result of				O
whereas		U		
moreover			U	
consequently				
nevertheless			U	
additionally				
in conclusion	O			

The empty lines belonging to the conjunctions *though*, *consequently* and *additionally* were kept unfilled because there was no statistically significant variation in their frequency. Seven conjunctions are apparently used at a statistically different frequency rate. As stated above, *additionally* and *consequently* rank the same across the Turkish and Spanish authors' corpora, and probably that is why no statistical difference was found in terms of frequency. However, for the conjunction *in conclusion*, the case is different: it is overused in Turkish authors' corpus, though more slightly than the other conjunctions. The conjunction used with the biggest statistical difference is *as a result of*, which is overused in Turkish authors' corpus with a significance value lower than .0001. Other five conjunctions with statistical difference value, *thus*, *furthermore*, *moreover*, *nevertheless*, *whereas* are all underused in the Turkish authors' corpus, the first four of which have a significance value lower than .001.

After answering the question of *how often*, the question of *how* the Turkish and Spanish authors use the conjunction *as a result of* the highest difference rate arises. To have a clearer idea of the usage of *as a result of*, the most overused conjunction in Turkish corpora relative to Spanish corpora, concordance hits on the usage of *as a result of* in both corpora are given below.

Concordance Hits 193	
Hit	KWIC
1	her Training Setting in Turkey As a result of Turkey being
2	term of the senior year. As a result of government polic
3	ity to discuss code switching. As a result of these factors
4	beliefs, identities and selves as a result of this process. 2
5	. This distinction has emerged as a result of several studies
6	behaviour of student teachers as a result of these cognitions
7	interviews in that, they emerge as a result of the evidence
8	ibed by Benjamin Bloom in 1953 as a result of usage of
9	ngs and underpinnings I obtain as a result of this analysis
10	orm involuntary code switching as a result of these observatic
11	5; Nil and Paramasivam, 2012). As a result of these investigat
12	for a long time (Wei, 2013), as a result of which, it
13	roviding moral support. III As a result of this study,
14	Second phase of data analysis As a result of the data
15	entor role dimensions emerging as a result of the factor
16	another mentor role dimension as a result of the factor
17	ld valid and reliable findings as a result of certain variable

Figure 2. Concordance hits on the usage of ‘as a result of’ in L1 Turkish authors’ corpus

Concordance Hits 83	
Hit	KWIC
61	the data obtained as a result of their familiarity with
62	as an improvement as a result of language contact. (197
62	later role-plays As a result of the abovementioned, we
63	tial in the 1980s As a result of their high frequency
64	he target culture as a result of the medium, and
62	ten greyish brown as a result of rape is not
63	ten grayish brown as a result of many language policies
64	ed The rights are as a result of different languages co
64	en The rights are as a result of critical incidents (Sci
64	ten greyish brown As a result of the Cross-Cutural
65	ten grayish brown as a result of the excess of
66	ten grayish brown as a result of their puffing up
66	ten grayish brown as a result of having the category
66	alled into action As a result of this European agreement
67	ech of bilinguals As a result of such a “meeting”
67	one language i.e. as a result of mental processes. Cogn
68	as a result of the social as

Figure 3. Concordance hits on the usage of ‘as a result of’ in L1 Spanish authors’ corpus

Figures 2 and 3 show that although there is no statistically significant difference in the grammatical usage of the conjunction between these two language variables, there are differences in the parts of the theses where it is employed. Spanish authors utilize the conjunction primarily for discussion or literature review parts, as can be observed by the concordance lines and what comes after it as a result, whereas Turkish authors prefer to use it primarily for data analysis or techniques sections. *As a result of* is used in a variety of sections in this particular corpus, and this variety of sections where it is used reveals the likely cause of this conjunction's overuse in Turkish authors' corpora compared to Spanish authors' corpora. The first and second hits in Turkish authors' corpora show us that they also use it for literature reviews or discussion parts to some extent.

Comparison between Turkish and English Authors' Corpora

After comparing two non-native authors' corpora, the researcher tried to understand the similarities and differences between Turkish and English authors' corpora. Therefore, another analysis was computed between L1 Turkish authors' corpus and L1 English authors' corpus. Table 6 below shows the statistical significance of the frequencies of the conjunctions.

Table 6. Statistical Significance (L1 Turkish relative to L1 English) (O = Overuse, U = Underuse)

Conjunction	p < 0.0001
thus	O
though	U
furthermore	
as a result of	O
whereas	
moreover	
consequently	
nevertheless	U
additionally	
in conclusion	O

Table 6 shows that there are now only five conjunctions employed at a statistically significant differential rate. This demonstrates that Turkish and L1 English authors employ the aforementioned conjunctions more frequently than Turkish and Spanish authors do. The fact that all of the conjunctions in Table 6 that differ significantly fall under the category $p < 0.0001$ and are all used at extremely different rates from one another is particularly noteworthy. It can also be said that the conjunction *in conclusion* is overused in the Turkish corpus though they rank the same (10th) in both corpora. *As a result of* is overused and *nevertheless* is underused in L1 Turkish authors' theses, which is consistent with the comparison of Turkish and Spanish authors' corpora and echoes the use patterns seen in L1 English authors' corpus.

To provide a clearer understanding, the concordance lines for two conjunctions, *thus* and *though*, that are over- and underused in Turkish authors' corpora in comparison to L1 English authors' corpora are presented in the figures below.

Concordance Hits 530	
Hit	KWIC
1	ne 2010-2011 academic year. Thus, information will be pr
2	uncil for Higher Education. Thus, Kocaeli University fol
3	it, to analyse it, and thus to learn it/from it" (
4	to their fellow classmates. Thus, learning from their ow
5	e lessons 77 in any way. Thus, all of the materials c
6	the universities in Turkey. Thus, their English proficie
7	s" (Liddicoat, 2007, p. 2). Thus, Sacks's approach focus
8	ds of talk and interaction, thus it inevitably relates t
9	es while performing a task, thus engaging in a form of
10	ainly about code switching. Thus, while they were talkir
11	supervisor to use Turkish, thus revealing a determinati
12	ium in language classrooms. Thus, the frustration they f
13	she would like to become. Thus her view of identity is
14	c teacher is not competent. Thus, it can be inferred thc
15	lighted a contradiction and thus provoked a reaction. ST
16	to follow her suggestions. Thus, this creates a frustrc

Figure 4. Concordance hits on the usage of 'thus' in L1 Turkish authors' corpus

Concordance Hits 324	
Hit	KWIC
1	Educación Nacional, 2006), thus causing a major shift i
2	use that foreign language. Thus, compulsory English as
3	to Colombian policy makers, thus making it important for
4	ne Country Profiles, 2011). Thus, the type of education
5	e communicative competences thus included grammatical, p
6	elu, 2003; Richards, 2006), thus leading to a discussior
7	earning 44 outcomes, and thus learner beliefs. Twice
8	tive methods (Ellis, 2002). Thus, these studies provide
9	assist changes in beliefs, thus demonstrating that beli
10	s, 2008; Wan et al., 2011), thus aiding the teacher by c
11	pe of assessment used would thus use more of the practic
12	to the assessment practice, thus demonstrating that what
13	e use of those assessments. Thus, older language assessm
14	Zhang & Burry-Stock, 2003), thus potentially impacting s
15	s, and assessment practices thus shapes how a teacher ar
16	earch. The qualitative data thus enhances the quantitati

Figure 5. Concordance hits on the usage of 'thus' in L1 English authors' corpus

Figures 4 and 5 demonstrate how the conjunction's grammatical usage varies between L1 Turkish and L1 English author corpora, two language variables. Despite the fact that Turkish authors appear to have stuck with the sentence-connecting function of *thus*, L1 English authors use it in two additional grammar structures: connecting sentences with the same subject by adding the gerund form of the second sentence's verb (as seen in lines 1, 3, 6, 9, 10, and 12) and connecting sentences with the same subject by adding the second sentence's conjugated verb (lines 11, 15 and 16). Figure 4 illustrates how only lines 8, 11 and 15 were used by Turkish authors to implement these functions. In Figure 5, lines 2 and 8 adopt the same grammar as the majority of Turkish authors, joining two independent phrases and beginning the second one with *so*. Turkish authors use *thus* less frequently than their L1 English colleagues, but an intriguing conclusion is that they appear to have overused it in their theses. Figures 6 and 7 below give us a better view of the conjunction *though* in Turkish and L1 English authors' corpora.

Concordance Hits 200	
Hit	KWIC
1	rs and/or tutors. 2 Even though there is a growing bc
2	urse work regulated by CHE, though with differences in t
3	different terminology. Even though particular approaches
4	of negotiation of identity, though there may be other as
5	zumi (1995) state that even though most language teacher
6	themselves in as teachers – though not as students. They
7	. He also notes that even though the student teachers'
8	arget language is used. Even though they may not express
9	eductive or inductive, even though they noted that they
10	might not be same even though they are shared by ir
11	e classes with 21 students, though they had to teach 6th
12	o the shared understanding, though unlike conversation c
13	er, 2002; Drew, 2005). Even though studies addressing th
14	requirements" (p. 8). Even though ten Have claims to "s
15	y initiated by the teacher, though it might be initiatet
16	y and Richards, 2010). Even though it is claimed that tr

Figure 6. Concordance hits on the usage of 'though' in L1 Turkish authors' corpus

Concordance Hits 337		
Hit	KWIC	
22	compensate (Al-Mahrooqi, 2011).	Though common, these strategies
23	anding conversational English,	though still requiring support
24	a, 2012, Priebe et al., 2012).	Though both strategies appear t
25	anisaeid (2013) indicated that	though both groups improved in
26	the same connotation. Further,	though vocabulary is often used
27	. Their findings indicate that	though both vocabulary size and
28	r & Ravenhorst-Kalovski, 2010).	Though interesting the findings
29	so be linked to maturity.	Though the study was conducted
30	y ELLs vocabulary development,	though important, diminishes ir
31	ding comprehension questions).	Though this would have simplifi
32	osttest design was considered.	Though a better design for the
33	y based reading comprehension.	Though there were no statistics
34	e Appendix E for lesson plan).	Though background knowledge car
35	truction for the Schema Group.	Though a number of different cc
36	text written in English. Even	though the ESL teacher in charg
37	normal distribution of scores.	Though further analysis will be
38	ation of prior knowledge. Even	though the ELL students continu

Figure 7. Concordance hits on the usage of 'though' in L1 English authors' corpus

Figures 6 and 7 present a similar picture to that presented in Figures 4 and 5. The corpus of L1 English authors shows more variation in the grammatical usage of the conjunction *though*, whereas Turkish authors tend to keep to just one. The grammatical usages that L1 English authors' corpora include the dominant usage of *though* as *although* (lines 25, 26, 27, 29, 31, 32, 33, 34, 35 and 37) and *although (it is ...)* (lines 22 and 30). In lines 36 and 38, *though* is used as an inseparable part of another conjunction, *even though*, which is the dominant grammatical usage in Turkish authors' corpus (all lines but 6, 11, 12 and 15 in Figure 6). The fact that Turkish authors have not mainly chosen to use other grammatical functions of *though* and have stuck to one function probably explains why it is underused in Turkish authors' corpus relative to L1 English authors' corpus.

Comparison between Spanish and English Authors' Corpora

Another comparison involved the corpora of L1 Spanish authors and L1 English authors. Although some similarities in conjunction usage across L1 Turkish, L1 English, and L1 Spanish; L1 English corpora were anticipated, the results were considerably different, with the exception of the use of *though*. The results are shown in Table 7 below.

Table 7. Statistical Significance (L1 Spanish relative to L1 English) (O = Overuse, U = Underuse)

Conjunction	p < 0.01	p < 0.001	p < 0.0001
thus		O	
though			U
furthermore		O	
as a result of			
whereas	O		
moreover		O	
consequently			
nevertheless		O	
additionally			
in conclusion			

As illustrated in Table 7, the only underused conjunction in Spanish authors' corpus compared to L1 English authors' corpus is *though*. The other five conjunctions, which are *thus*, *furthermore*, *whereas*, *moreover* and *nevertheless*, were used at a statistically different rate and determined as being overused in Spanish authors' corpus.

To exhibit the usage variations of the conjunction used at the highest statistical difference rate, *though* ($p < 0.0001$), concordance lines generated in L1 Spanish and L1 English corpora are respectively shown below in Figures 8 and 9.

Concordance Hits 57	
Hit	KWIC
0	also reintroduces several (though not all) business exp
9	level. It is acknowledged, though, that the length of t
10	s of conversation analysis, though it differs from CA in
11	chers into primary schools, though this has not been a f
12	the Project had aimed for, though they had noted some i
13	s tentative' and that, even though there exists a large
14	ipants', i.e. the teachers, though the learners are alwa
15	et the students to do (even though she expresses this as
16	stops video)) mm? () even though the example maybe is
17	rent. 191 What is clear, though, from the two example
18	instruction. However, even though in all cases there wo
19	he terms in both languages, though, unlike in the previc
20	t was frequent in the data, though not a focus of analys
21	of checking the task. Even though the teacher repeats '
22	do you say even so)) =even though even †though you don'
23	ven so)) =even though even † though you don't have clean
24	ning) at line 19 with 'even though'. Interestingly, the

Figure 8. Concordance hits on the usage of 'though' in L1 Spanish authors' corpus

Concordance Hits 337	
Hit	KWIC
22	compensate (Al-Mahrooqi, 2011). Though common, these strategies
23	anding conversational English, though still requiring support
24	a, 2012, Priebe et al., 2012). Though both strategies appear t
25	anisaeid (2013) indicated that though both groups improved in
26	the same connotation. Further, though vocabulary is often used
27	. Their findings indicate that though both vocabulary size and
28	r & Ravenhorst-Kalovski, 2010). Though interesting the findings
29	so be linked to maturity. Though the study was conducted
30	y ELLs vocabulary development, though important, diminishes ir
31	ding comprehension questions). Though this would have simplifi
32	posttest design was considered. Though a better design for the
33	y based reading comprehension. Though there were no statistics
34	e Appendix E for lesson plan). Though background knowledge car
35	truction for the Schema Group. Though a number of different cc
36	text written in English. Even though the ESL teacher in charg
37	normal distribution of scores. Though further analysis will be
38	ation of prior knowledge. Even though the ELL students continu

Figure 9. Concordance hits on the usage of 'though' in L1 English authors' corpus

When we look at how *though* is used grammatically in both corpora, we can see that L1 Spanish authors typically stick to the *even though* usage and do not choose to utilize any other functions. This is likely the same factor that contributes to L1 Turkish and Spanish authors' underuse of conjunctions compared to L1 English authors.

DISCUSSION & CONCLUSION

Corpus linguistics is a valuable resource to enhance language teaching. By providing naturally occurring language data, it paves the door for academics to learn more about the language(s) they are interested in as well as learners to see how the language is used by native speakers. In order to make their teaching more fruitful and authentic, it also gives teachers the opportunity to develop corpus-driven activities or data-driven learning.

This study concentrated on two research questions, the first of which attempted to determine the frequency of ten conjunctions at B2-level according to CEFR in the BAWE Corpus in corpora of published PhD Theses in English written by L1 English, L1 Turkish, and L1 Spanish researchers in the ELT field. This study also

aimed to contribute to the field by highlighting the benefits of corpus linguistics. The second question further asked whether there is a substantial difference in the frequency of these conjunctions across three language variables. The most frequent ten conjunctions in question were revealed as *thus*, *though*, *furthermore*, *as a result of*, *whereas*, *moreover*, *consequently*, *nevertheless*, *additionally* and *in conclusion*, starting from the most frequent to the least frequent in this list. Comparing L1 Turkish to L1 English, L1 Spanish to L1 English, and L1 Turkish to L1 Spanish revealed overuses and underuses of each applicable conjunction.

The findings of this study can be interpreted on several counts. When the corpora of two non-native English speakers—Turkish and Spanish authors—are combined and contrasted with those of L1 English authors, the conjunction *thus* can be considered to be overused in both non-native corpora, whereas the conjunction *though* is underused. Although there is no statistically significant difference in the frequency of the conjunction *though* between Turkish and Spanish authors' corpora, the Turkish authors' corpus shows that the conjunction *thus* is underused. If the goal is to track how L1 English authors use conjunctions, this can be taken to mean that Spanish authors should aim to use *thus* less and that *though* usage can be increased in both settings by exposing non-native scholars to more *though* usage and by encouraging them to expand their usage beyond just using it in conjunction with *even though*.

It may be claimed that Turkish authors utilize the conjunction *nevertheless* at an underused rate in both comparisons (Turkish vs L1 English and Turkish vs Spanish) when the corpus of Turkish authors is placed on one side and the Spanish and L1 English corpora are placed on the other. It could be because this conjunction is taught considerably later than others at the B2 level, like *thus* or *as a result of*, and is considered a more advanced conjunction as opposed to a CEFR-B2-level conjunction. It is highly likely to infer that lexical complexity (Palloti, 2015) may contribute to this. On the other hand, in both comparisons, the conjunctions *as a result of* and *in conclusion* are overused.

The five conjunctions—*thus*, *furthermore*, *whereas*, *moreover*, and *nevertheless*—were overused by Spanish authors in both comparisons (Spanish vs Turkish and Spanish vs L1 English), when the corpus of Spanish authors is taken as one side and the Turkish and L1 English corpora are as the other. The inclusion of *furthermore* and *moreover* on this list may be due, in part, to the fact that the Spanish word for these conjunctions, *además*, contains the English word *more* (*más*), making it easier for learners to code these words in their second language (L2). Further analyses that explore the reasons why the other conjunctions, such as *whereas*, *thus*, and *nevertheless*, appear to be overused in both comparisons are required.

Overall, some conjunctions have a similar syntactic structure in different languages, e.g., *furthermore* and *además* (Spanish) and this possibly explains the overuse of the conjunction in question. Some conjunctions (e.g., *nevertheless*) are taught in Turkish curriculum of teaching English later than the others in the list (e.g., *thus* and *in conclusion*) to be consistent with the principles of language learning, which begin with basics and progressively move on to more intricate language structures as students progress (Ellis, 2015; Lightbown & Spada, 2021). For instance, in academic writing, "thus" and "in conclusion" are used to denote conclusions and logical linkages. Likewise, Demir (2019) found that the word "nevertheless" was absent from pre-test but returned in the post-test. The finding is in line with theories of language acquisition that support a progressive curriculum that introduces more sophisticated linguistic structures later on. The fact that the word "nevertheless" was absent from the pre-test and then appeared in the post-test shows how learners' comprehension and application of complicated conjunctions have evolved over time. Although there is no rigid guideline for teaching conjunctions, this approach aligns with language fundamentals, which might explain overuses and underuses.

The research can be expanded upon by adding two more corpora—L1 Spanish speakers' theses in Spanish and L1 Turkish speakers' theses in Turkish—and by comparing the corpora of native speakers of different languages to one another in order to determine how (and how frequently) a conjunction is utilized in each language. To further comprehend the difference between these language characteristics, L1 interference may be investigated. Instead of PhD theses, research articles might be used as a database for corpora to carry out a comparable investigation. In addition to these, conjunctions having various grammatical functions, such as *though*, can be thoroughly studied in other corpora used by non-native academics, L1 English corpora, namely ICLE (International Corpus of Learner English), COCA (Corpus of Contemporary American English) and BASE (British Academic Spoken English).

Implications

This study has a great deal of promise to advance teaching academic writing in a number of ways. At the outset, this study uses a corpus-based approach to analyze academic writing, providing insights into linguistic patterns and preferences for L1 English, L1 Turkish, and L1 Spanish researchers while using conjunctions, aiding language instructors in effective teaching. In addition, the study examines ten B2-level conjunction frequencies, enabling educators to identify common connective elements in academic writing, enhancing students' understanding and comprehension (Yoon & Hirvela, 2004). Furthermore, the study's investigation of conjunction usage across three language variables (L1 English, L1 Turkish, and L1 Spanish) emphasizes the impact of language variation (O'Sullivan, 2019). Teachers who are aware of these variations can better adapt their methods of instruction to meet the requirements of students from various language backgrounds. This study can also pinpoint the conjunctions and linguistic elements that help written texts acquire an academic voice through corpus analysis (Fløttum et al., 2006). Last but not least, it may create an opportunity to learn how to do research and data analysis using a corpus-based approach, emphasizing evidence-based writing (Giannoni, 2010) and critical analysis in academic environments. Inspiring students to conduct their own linguistic research enhances their research skills. Overall, these contributions to both corpus linguistics and the field of ELT will aid language learners, teachers, and researchers in understanding the languages in question in a more systematic and thorough manner.

Statements of Publication Ethics

To guarantee the legitimacy and dependability of the research findings within the academic community, this study adheres to the principles of data integrity, proper attribution, and transparent reporting.

Conflict of Interest

This study does not have any conflict of interest.

REFERENCES

- Ädel, A., & Erman, B. (2012). Recurrent word combinations in academic writing by native and non-native speakers of English: A lexical bundles approach. *English for Specific Purposes*, 31(2), 81-92. <https://doi.org/10.1016/j.esp.2011.08.004>
- Biber, D., Conrad, S., & R. Reppen. (1998). *Corpus linguistics: Investigating language structure and use*. Cambridge: Cambridge University Press.
- Bybee, J. (2008). Usage-based grammar and second language acquisition. In P. Robinson & N. C. Ellis (Eds.), *Handbook of Cognitive Linguistics and Second Language Acquisition* (pp. 226-246). Routledge.
- Byrd, P., & Coxhead, A. (2010). On the other hand: Lexical bundles in academic writing and in the teaching of EAP. *University of Sydney Papers in TESOL*, 5(5), 31-64.
- Chen, Y. H., & Baker, P. (2010). Lexical bundles in L1 and L2 academic writing. *Language Learning & Technology*, 14(2), 30-49.
- Christie, F., & Derewianka, B. (2008). *School discourse: Learning to write across the years of schooling*. London: Continuum.
- Conrad, S. M., & Biber, D. (2005). The frequency and use of lexical bundles in conversation and academic prose. <https://doi.org/10.1515/9783484604674.56>
- Coşkun, E. (2011). Cohesion in Compositions of Turkish and Immigrant Students. *Kuram Ve Uygulamada Eğitim Bilimleri*, 11(2), 892-899.
- Council of Europe. (2001). *Common European framework of reference for languages: Learning, teaching, assessment*. Cambridge, U.K: Press Syndicate of the University of Cambridge.
- Demir, C. (2019). Developing of conjunctive adverbs in the writing of English for undergraduate students. *EKEV Akademi Dergisi*, 23(78), 137-154.
- Diessel, H. (2004). *The acquisition of complex sentences*. New York/Cambridge: Cambridge University Press.
- Diessel, H. (2017). Usage-based linguistics. In M. Aronoff (Ed.), *Oxford Bibliographies in Linguistics*. New York: Oxford University Press.
- Ellis, N. C. (2006). Language acquisition as rational contingency learning. *Applied Linguistics*, 27, 1-24.

- Ellis, R. (2015). *Understanding second language acquisition 2nd edition*. Oxford University Press.
- Fløttum, K., Dahl, T., & Kinn, T. (2006). Academic voices. *Pragmatics & Beyond*, 148. <https://doi.org/10.1075/pbns.148>
- Giannoni, D. S. (2010). *Mapping academic values in the disciplines: A corpus-based approach*, (Vol. 124). Peter Lang.
- Goldberg, A. E. (2006). *Constructions at work: The nature of generalization in language*. Oxford, UK: Oxford University Press.
- Granger, S. & Tyson, S. (1996). Connector Usage in the English Essay Writing of Native and non-Native EFL Speakers of English. *World Englishes*, 15(1), 17–27. <https://doi.org/10.1111/j.1467-971X.1996.tb00089.x>
- Gries, S. T., & Ellis, N. C. (2015). Statistical measures for usage-based linguistics. *Language Learning*, 65(S1), 228-255.
- Hasan, R., & Halliday, M. A. (1976). *Cohesion in English*. London: Longman.
- Hunston, S. (1995). Grammar in teacher education: The role of a corpus. *Language Awareness*, 4(1), 15-31. <https://doi.org/10.1080/09658416.1995.9959864>
- Kuswoyo, H., Sujatna, E. T. S., Indrayani, L. M., & Rido, A. (2020). Cohesive conjunctions and and so as discourse strategies in English native and non-native engineering lecturers: A corpus-based study. *International Journal of Advanced Science and Technology*, 29(7), 2322-2335.
- Lightbown, P. M., & Spada, N. (2021). *How languages are learned 5th edition*. Oxford University Press.
- Martín, P. M. (2003). A genre analysis of English and Spanish research paper abstracts in experimental social sciences. *English for Specific Purposes*, 22(1), 25-43. [https://doi.org/10.1016/S0889-4906\(01\)00033-3](https://doi.org/10.1016/S0889-4906(01)00033-3)
- Mehl, S. W. (2016). *Corpus onomasiology: A study in World Englishes* (Doctoral dissertation, UCL (University College London)).
- Nesi, H., & Basturkmen, H. (2006). Lexical bundles and discourse signalling in academic lectures. *International Journal of Corpus Linguistics*, 11(3), 283-304. <https://doi.org/10.1075/ijcl.11.3.04nes>
- O'Flynn, J. (2022). Lexical bundles in the academic writing of the Arts and Humanities: from corpus to CALL. *Yearbook of Phraseology*, 13(1), 81-108. <https://doi.org/10.1515/phras-2022-0006>
- O'Sullivan, J. (2019). *Corpus linguistics and the analysis of sociolinguistic change: Language variety and ideology in advertising*. Routledge.
- Öztürk, Y., & Durmuşoğlu-Köse, G. (2016). Turkish and Native English Academic Writers' Use of Lexical Bundles. *Journal of Language and Linguistic Studies*, 12(1), 149-165.
- Paltridge, B. (1995). Genre Analysis and the Identification of Textual Boundaries. *Applied Linguistics*, (2), 502–505. <https://doi.org/10.1093/applin/15.3.288>
- Pallotti, G. (2009). CAF: Defining, refining and differentiating constructs. *Applied Linguistics*, 30, 590–601. <https://doi.org/10.1093/applin/amp045>
- Pallotti, G. (2015). A simple view of linguistic complexity. *Second Language Research*, 31(1), 117-134. <https://doi.org/10.1177/0267658314536435>
- Robinson, P. (2007). Task complexity, theory of mind, and intentional reasoning: Effects on L2 speech production, interaction, uptake and perceptions of task difficulty. *International Review of Applied Linguistics*, 45, 193–213. <https://doi.org/10.1515/iral.2007.009>
- Schleppegrell, M. J. (2004). *The language of schooling: A functional linguistics perspective*. Mahwah, NJ: Lawrence Erlbaum.
- Trebits, A. (2009). Conjunctive cohesion in English language EU documents—A corpus-based analysis and its implications. *English for Specific Purposes*, 28(3), 199-210. <https://doi.org/10.1016/j.esp.2009.04.004>

- Ucar, S. (2017). A corpus-based study on the use of three-word lexical bundles in the academic writing by native English and Turkish non-native writers. *English Language Teaching*, 10(12), 28-36. <http://doi.org/10.5539/elt.v10n12p28>
- Wilson, A. (2013). Embracing Bayes factors for key item analysis in corpus linguistics. In: *New approaches to the study of linguistic variability. Language Competence and Language Awareness in Europe*. Peter Lang: Frankfurt, 3-11.
- Yoon, H., & Hirvela, A. (2004). ESL student attitudes toward corpus use in L2 writing. *Journal of Second Language Writing*, 13(4), 257-283. <https://doi.org/10.1016/j.jslw.2004.06.002>
- Zhao, X. (2011). The use of casual connectives in non-English majors' writings: A study based on picture compositions and the SWECCCL corpus. *Foreign Language Education in China*, 4(2), 12–20.
- Zou, B. (2015). A Corpus-based Analysis of the Use of Conjunctions in an EAP Teaching Context at a Sino-British University in China. In *Corpus Linguistics in Chinese Contexts* (Eds. Zou, B. & Hoey, M.). 134-157. Palgrave, Macmillan: UK