

A Corpus Linguistic Study on the Use of However in British Academic Spoken and Written English*

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Abstract

Corpus studies shed light on academic discourse in terms of genre, lexicon, and grammar. In order to expand grammatical knowledge, this corpus-based study takes as an evidence based approach and focuses on however, a single adverb reported as being one of the most commonly used linking adverbials in academic discourse, and analyses the uses of however in British academic spoken and written English. Analysis of British Academic Written English (BAWE) and British Academic Spoken English (BASE) Corpus provided comprehensive linguistic information on the use of linking adverbial however in terms of its frequency, positional distribution in clauses, collocations and clusters. The findings indicated that contrary to common pedagogic academic writing and English as a Second Language (ESL) or English as a Foreign Language (EFL) grammar books, however has various functions in British academic English. Furthermore, usages of however differ in written and spoken academic discourse.

Keywords

However;
conjunction;
academic discourse;
BAWE; BASE; EAP

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Introduction

As a sub-branch of English for specific purposes (ESP), English for academic purposes (EAP) is a broad and growing field including “...classroom language, teaching methodology, teacher education, assessment of language, needs analysis, materials development and evaluation, discourse analysis, acquisition studies in EAP contexts, research writing and speaking at all academic levels, the sociopolitics of English in academic uses and language planning...” (Hamp-Lyons, 2011, p.89). Due to the increasing number of international students pursuing their academic lives in English-speaking countries and globalization of universities along with the dominance of English in the academy as an academic lingua franca, academic literacy skills, particularly writing and speaking are recognized as the most important skills in the field of EAP. These productive skills are at the heart of the EAP which aims to improve students’ writing related to their specific fields, and communicative competence in any academic setting such as conference presentations, seminars, and a number of digital academic discourse (O’Halloran et al., 2016). In order to support and improve students’ academic literacy, material design based on students’ specific needs is vital for EAP pedagogy which is assisted by corpus studies. In the field of EAP, corpus studies are valuable aids in giving details of discourse, deciding for components of syllabus, exemplifying usages of language, and facilitating data driven learning. Thus, corpus studies are considered to be beneficial in EAP. As Nesi (2016) stated, “All types of corpus investigation have their place in EAP practice; the appeal is that almost any search of any academic corpus can reveal information that is genuinely new to even the most experienced EAP practitioner” (p. 206).

Corpus studies shed light on academic discourse in terms of genre, lexicon, and grammar. For the purpose of expanding our grammatical knowledge, this study uses corpus study as an evidence based approach and aims to analyse uses of *however* in written and spoken academic registers. This paper is divided into five sections. The first section gives an overview of *however* as an adverb and a connector. In the second section problems regarding the use of *however* and the reasons for analyzing *however* are discussed. Methodology is outlined in the third section and analyses of *however* in corpora of British Academic Written English (BAWE) and British Academic Spoken

English (BASE) are presented in the fourth section. Conclusions of the study are drawn in the final section.

However as an adverb and conjunction

As one of the major parts of speech in English, adverbs describe verbs, adjectives, and phrases. In Longman Grammar of Spoken and Written English, Biber et al. (1999) include *however* in two sections titled adverbs and adverbials. The adverb *however* is a compound adverb which is the combination of the words *how* and *ever*. Syntactic role of *however* falls into the category of adverbs as clause elements/adverbials, and *however* is defined as a linking adverbial connecting sentences and phrases. Among the seven categories of adverbs, *however* semantically appears in contrast/concession which is a subcategory of linking. The formal, syntactic, and semantic features of *however* (Biber et al., 1999) are summarized in the Table 1 below.

Table 1. Formal, syntactic, and semantic features of adverb *however*

	Category	Subcategory
Form	Compound	-
Syntactic feature	Clause element- Adverbial	Linking
Semantic feature	Linking	Contrast/Concession

As a linking adverbial *however* has the role of a connector strengthen cohesion in discourse. According to Biber et al. (1999) linking adverbials do not add new information to sentences and function as connectors to relate two discourse units. Semantic function of *however* as a linking adverbial is included in contrast/concession group. Functions of contrast and concession are combined in the uses of *however* as follows: “Until recently hypobiosis was not considered to be a feature of this genus. However, there is now ample evidence in temperate areas that hypobiosis plays an important part in the epidemiology ...” (Biber et al., 1999: 879).

Analysis of British National Corpus (BNC) by Biber et al. (1999) revealed that most of the linking adverbials are used as single adverbs in academic and conversational discourse. *However* is an example of a single adverb which is reported to be one of the most commonly used linking adverbials in academic discourse. According to Biber et al. (1999), “Academic prose does not have any linking adverbials

occurring as frequently as *so* and *then* in conversation, but several linking adverbials occur with notable frequencies: *however*, *thus*, *therefore*, and *for example*” (p.886). In addition, stylistic preferences for linking adverbials in written academic register indicated that in order to express contrast mostly *however* is used rather than *yet*, *on the other hand*, and *so on*. The position of *however* can be sentence initial, medial, and final exemplified by Cowan (2008, p. 615) as follows:

From a functional grammar perspective, Halliday & Matthiessen’s (2004) classification of *however* as a discourse connector is more detailed as seen in Table 2 presenting a summary of the categorization. In Halliday & Matthiessen’s (2004) logico-semantic classification, relations explained by conjunctions are divided into three groups as elaboration, extension, and enhancement. *However* is included in both extension and enhancement groups. Meaning of extension is given by addition or variation conjunctions. Addition can be negative, positive or adversative which explains semantic functions of *however*. The enhancement group has four types of cohesive devices: spatio-temporal, manner, causal-conditional and matter. Causal-conditional meaning can be either general or specific by indicating result, reason, or purpose. The purpose is also subdivided into positive, negative, or concessive in which *however* is involved. To sum up, *however* is an adversative and concessive conjunction from a functional perspective according to Halliday & Matthiessen (2004) as exemplified below:

Adversative meaning: The solar elevation angle is comparatively low by October, when the hole was at its deepest, *however* is much higher in November, when the ultraviolet (UV) effect might be stronger at the surface (p. 407).

Concessive meaning: The outstanding performance of U.S. and other NATO military units has enabled SFOR to fulfill the military tasks... *However*, success in achieving the civil, political, and economic tasks has been slower in coming (p. 547).

Table 2. Functional categorization of *however*

Function	Category
Extension	Additive
Enhancement	Causal-conditional
	Adversative
	Specific
	Purpose
	Concessive

Problems Regarding The Use of However for L2 Learners

However can be defined as a connector, conjunction, linking adverbial, cohesive device or discourse connector. The role of *however* as a cohesive device is particularly important in academic writing and speaking as cohesion is vital for students' written and spoken productions. This corpus based study is focused on *however* to expand knowledge of this specific connector due to the fact that *however* is the most common linking adverb in academic prose according to the BNC findings of Biber et. al (1999): "Academic prose does not have any linking adverbials occurring as frequently as so and then in conversation, but several linking adverbials occur with notable frequencies: *however*, thus, therefore, and for example" (p. 886). Moreover, previous studies by Tapper (2005), Lee (2004), Narita et. al (2004), Yan (2014), Zou & Peng (2015) respectively compared Swedish, Korean, Japanese, and Chinese learners' academic written corpora and native academic corpora. Their findings mostly reported overuse, underuse, or ineffective use of conjunctions, and L1 transfer. Similarly, for Turkish context Dülger (2007) reported that writing quality was problematic and for the solution focusing on the effective use of discourse markers in terms of frequency and variety seemed to be essential. In addition, Cephe & Aşık (2013) noted that ineffective and underuse use of discourse markers was problematic in Turkish EFL context.

All of these studies suggested that effective usage of cohesive devices is significant for EFL/ESL learners. However, conjunctions are mostly presented in long lists and tables by only giving meaning and some punctuational rules, which can be described as a pedagogic problem. Therefore, for effective material and syllabus designs, EAP needs contributions of corpus studies providing information and samples of current usage of any specific item, and comparative corpus studies revealing problems of EFL/ESL learners. With this in mind, the aim of our work is to widen current knowledge of conjunctions by analyzing use of *however* extensively in BAWE and BASE corpora in order to contribute EAP studies. Despite the significant role of the linking adverbial/conjunction *however* in academic registers, no one to the best of our knowledge has studied *however* in written and spoken discourse. In this study, BAWE and BASE were analyzed in order to seek answers for the following research questions:

1. Is there any difference between BASE and BAWE in terms of the frequency of use of *however*?
2. What is the positional distribution of *however* in academic written register?
3. What word classes does *however* frequently collocate with in academic written and spoken registers?
4. What are the fixed expressions formed with *however* across academic written and spoken registers?

Method

For the purpose of investigating the use of *however* in academic written and spoken discourse, the data of this study was drawn from British Academic Written English (BAWE) Corpus and British Academic Spoken English (BASE) Corpus. Although *however* is not as common as in written discourse, in order to provide extensive knowledge regarding the linking adverbial *however*, spoken academic discourse was analyzed in BASE Corpus as well.

As an output of a project, an investigation of genres of assessed writing in British Higher Education from 2004 – 2007, BAWE Corpus by authors Nesi, Gardner, Thompson and Wickens involves more than six million of words derived from 2761 pieces of high-graded assignments of students from four levels of study (undergraduate and taught masters level), four disciplinary areas (Arts and Humanities, Social Sciences, Life Sciences and Physical Sciences), and thirty-five disciplines. The number of genres included in BAWE Corpus is thirteen: essays, critiques, case studies, explanations, methodology recounts, problem questions, and proposals. BAWE Corpus provides open access for researchers. 30% of the BAWE Corpus is created by nonnative EFL students, which indicates that BAWE is a representative of English as an academic lingua franca (ELF), (Nesi, 2016).

BASE Corpus developed by Hilary Nesi and Paul Thomson at the Universities of Warwick and Reading includes 1,644,942 words in total. Transcriptions of approximately 200 hours of recording were derived from 160 lectures and 40 seminars from four disciplinary areas (Arts and Humanities, Social Studies and Sciences,

Physical Sciences, Life and Medical Sciences). Each disciplinary area has 40 lectures and 10 seminars, which indicates equal representation of the disciplinary groups.

AntConc 3.4.4, a software for use of researchers, teachers, and learners in corpus linguistics developed by Laurance Anthony in 2004, was used to analyze frequency, positional distribution, collocation, and clusters of the linking adverbial *however* in BAWE and BASE respectively.

Analysis and findings

After the analysis of the use of the conjunctive adverb *however* by native speakers both in British academic written and spoken English, it was revealed that *however* was used much more often in academic written English.

Due to the fact that the corpora used in this study significantly differed in size, the calculations were done based on per million words in order to normalize the frequency of the conjunction being investigated. Using AntConc 3.4.4, the frequency, concordances and collocates and clusters of the conjunctive adverb *however* were obtained for both BAWE and BASE.

The data was analyzed on the basis of frequency, positional distribution, collocations and clusters of *however*, respectively.

Frequency of However in BAWE and BASE

Frequency of *however* in BAWE and BASE significantly differ. As indicated in Table 3 by the percentages, both corpora significantly differ in their frequency. When their ranks were examined, it was revealed that the conjunctive adverb *however* appeared as the most frequent 49th word in BAWE, which included over 6.5 million words in total, but it was ranked as the 540th in the wordlist of BASE, which included 1.7 million words in total. Therefore, it was clear that *however* was a much more typical word to be used in written English. Also, the percentages obtained from both corpora showed that British speakers seemed to make use of *however* more frequently in academic writing (0.18%) than academic speaking (0.01%). When the frequency of *however* was analyzed in detail, it was found out that *however* in BAWE (n=1839) was

ten times more common than in BASE (n=175). This difference can be attributed to the more expressive nature of academic writing.

Table 3. Overall frequency and distribution of *however*

BAWE			BASE		
Rank	N/million	P/million	Rank	N/million	P/million
49 th	1829	0.18%	540 th	175	0.01%

Positional Distribution of the Conjunctive Adverb However in BAWE

The conjunctive adverb *however* can take different positions in a sentence, which causes slight differences in its meaning. It can be used in initial position, medial position and final position in a sentence (Yan, 2014). In all these positions, *however* encodes two different semantic functions, either adversative or concessive. The percentages of these positions in the BAWE corpus are presented Table 4.

Table 4. Positional distributions of *however* in BAWE

Corpus	Sentence-initial		Sentence-medial		Sentence final		Total N/million
	N/million	P/million	N/million	P/million	N/million	P/million	
BAWE	1113	60.3%	720	39%	10	0,55%	1843

The most common position for the conjunctive adverb *however* is sentence-initial (60.3%) in BAWE. Sentence-medial position (39%) has the second largest proportion of occurrences of the conjunctive adverb *however* and sentence final position (0,55%) is the least preferred one in written corpus. The percentages indicate that the final position of *however* is not a preferred usage in academic written English.

However in sentence-initial position

As revealed by the Table 4, the initial position of the conjunctive adverb *however* is much higher in percentage than the other positions. As mentioned above, the sentence-initial *however* is the part that is emphasized in the sentence and it identifies the relation between two separate clauses. The examination of *however* in BAWE has revealed that sentence-initial *however* has both an adversative (backward) or concessive (forward) semantic function, both of which indicate that there is a contrast to the previous sentence or enhancement of the previous sentence. The example (1a) illustrates the adversative function of clause-initial *however*, which indicates a contrast

between two separate clauses while the example (1b) demonstrates the concessive function of clause-initial *however*, which does not mean a direct contrast but an inconsistency between the preceding sentence and the sentence beginning with *however*. In addition to the semantic relation that *however* has with the preceding clause, when the following examples are examined, it can be clearly seen that the use of *however* with punctuation marks in initial position is not the same for all initial positions. In many grammar books it is taught that when it is used in initial position, *however* is immediately followed by a comma and so separated from the rest of the clause (Celce-Murcia & Larsen-Freeman, 1999; Lynch and Anderson, 2013), but the analysis of *however* in BAWE has revealed that although *however* is immediately followed by a comma in some sentences as illustrated by (1a) and (1b) below, it is not in others as an example (1c).

(1a) ... For Age, we have a maximum of 59 years, which I have not assumed to be wrong. However, the minimum of Age is 1 year, which can correctly be assumed to be an error.

(1b) ... Daniel Roche shows a wider world of rich materialism, thereby suggesting a possible review of the pre-Revolutionary social categorization dynamics that led to the regime change. However, consumption remains inherently joined to the hip of class.

(1c) ... notions of 'electric fluid' and 'particles of electricity' he used seem somewhat vague compared to our modern terminology of charge and electrons. However his ideas were particularly original and expressed with exceptional clarity.

However in sentence-medial position

The second most frequent position that *however* takes in a sentence is sentence-medial position as indicated in Table 4. This position of *however* occurs as four different variants and each variant of medial-position of *however* in BAWE was examined separately; firstly as *however* in after-subject position, secondly as *however* in after-circumstantial adjunct position, thirdly as *however* in after-stance adjunct position and finally *however* in post-verb position. Syntactically, in all these positions *however* is either preceded or followed by a comma (Lynch and Anderson, 2013).

Firstly, the use of *however* in after-subject position was examined. In this use of *however*, it is the subject that is highlighted, so the effect of *however* is reduced and it is not as strong as it is in sentence-initial position. Therefore, whether there is a direct contrast or an enhancement of the preceding clause is not set clearly from the beginning. The important thing is the theme of the second clause including post-subject *however*.

Also, syntactically post-subject *however* must be preceded and followed by a comma and separated from the rest of the clause just like in sentence-initial *however*. The examples (2a) and (2b) demonstrate the use of *however* in post-subject position. From the examples, it can be clearly seen that in some sentences, punctuation rule is followed as in (2a), but in others it is not strictly followed as illustrated by (2b).

(2a) ... the oppressed cultures. This 'savagery', **however**, influenced the Englishman's...

(2b) ... (, 1995:269). Hernes (2001:14,223), **however** defines social change under two...

The second position of *however* in sentence-medial position is the use of *however* after a circumstantial adjunct. This position of *however* is similar to the post-subject position in that its tone of emphasis is reduced and the emphasized part in clause is the circumstantial adjunct, which is usually placed at the beginning or end of a sentence. *However*, for our investigation, only clause-initial circumstantial adjunct was examined. With this position, the themes that are contrasted become clear with the beginning of the second clause. For example, as the example (3a) displays, in the first part of the sentence there was another time mentioned, and the second sentence gives the contrast right at the start by beginning the sentence by a different time expression. Syntactically, this position of *however* also requires the use of commas both just before and just after *however*. The examination of the corpus revealed that *however* in this position was mostly used accurately with respect to the punctuation requirements. The following examples from (3a) to (3c) illustrate the use of *however* after a circumstantial adjunct.

(3a)...Chairman Mao. By the end of 1978, **however**, his position was on shaky ground...

(3b)... the grace of the Soviet Union. At this time, **however**, Poland was still by no means...

(3c) ... of serious wars. In New England, **however**, Governor William Bradford ensured that...

Another position of *however* in sentence-medial position is the use of *however* after a stance adjunct. The positional effect of *however* in this position is the same as the position of *however* after a circumstantial adjunct, where the emphasis is not on *however* but on the circumstantial adjunct. The examination of corpora has indicated

that *however* is used after three different kinds of stance as epistemic stance as illustrated by (4a), evidential stance as in (4b) and domain stance revealed by (4e). The punctuation rule with respect to the use of *however* is mostly followed in this position although there are some exceptions.

- (4a)... from the outset'. Paradoxically, **however**, it was Stalin's caution to avoid alarming...
- (4b)... towards their superiors. Personally, **however**, I believe that conflicts should not be...
- (4c) ...strange as the plague. Medically, **however**, the idea of crowding is crucial, because...

The sentence-medial position of *however* in BAWE has also revealed that *however* is frequently used in post-verb position as well. In this usage, *however* is not emphasized just like in the other types of sentence-medial positions. The following examples (5a) and (5b) illustrate the use of *however* after verbs in a sentence. The examination of the corpus suggests that the punctuation rule with respect to the use of *however* is mostly followed in this position as well.

- (5a)... Johnson (1949) suggested, **however**, if managers can convince workers that higher...
- (5b)...perverse. It may be argued, **however**, that the legal profession is not self-regulating...

However, the examination of BAWE also revealed an interesting use of *however*, which is after a finite clause. The function of *however* in this position is similar to but, both semantically and syntactically. The conjunctive adverb *however* functioning just like but is used in lower cases in sentence-medial position and it indicates contrast with the preceding clause. However, normally, if the conjunctive adverb *however* is used to connect two different clauses and if it is to be used in lower cases in medial position, then it must be preceded by a semicolon and followed by a comma as illustrated by (6a). However, the examination of the corpus revealed that *however* used after a finite clause is frequently used in lower cases and is preceded by a comma and sometimes followed by a comma. The example (6c) clearly shows the unfamiliar use of *however* applying a different punctuation rule.

- (6a)... natural disadvantage through technology; **however**, their success was brief, for...
- (6c)... The population size is fairly small, **however**, mete-analysis will mean that the results...

However in sentence-final position

The last position of *however* that was examined in a clause was the sentence-final position. As identified in Table 4, this position of *however* is too low in percentage in academic written English; it has been revealed that it only occurs ten times per million words across the whole corpus. The semantic function of *however* in clause-final position is different both from the sentence-initial and sentence-medial positions in that *however* in sentence-final position has a weak emphasis on contrast between the preceding sentence and the sentence containing *however*, but it still puts an emphasis on contrast. The following examples from (7a) to (7c) illustrate the use of *however* in sentence-final position. Normally, *however* in this position must be preceded by a comma as it is in examples (7a) and (7b), but some sentences as in the example (7c) lack this punctuation mark, not strictly following the punctuation rule.

- (7a)... requirements can also be useful, **however**. Bulmer claims that statisticians often go...
- (7b)... does seem to be imminent, **however**. Shayer and Adey (1981), identify a struggle...
- (7c)... raise an important distinction here **however**. Seeing as there are few actual pure...

Collocation Analysis of however in BAWE

Collocations are usually defined as a combination of words in certain grammatical patterns. In this study, the collocations of *however* were analyzed in terms of words occurring immediately to the right and to the left of the conjunctive adverb *however* based on the frequency results. Firstly, the grammatical categories of these words following and preceding *however* were examined through the analysis of the total corpus as revealed in Table 5.

Table 5. Ten most frequent word-class colligates of *however* in BAWE

	Left colligates			Right colligates		
	Word class	Collocate	F/million	Word class	Collocate	F/million
1	Copula be	is	22	Definite article	the	273
2	Pronoun	this	15	Personal pronoun	it	154
3	Copula be	are	10	Pronoun	this	116
4	Noun	time	10	Pronoun	there	73

5	Personal pronoun	it	8	Preposition	in	64
6	Noun	figure	8	Conjunction	as	58
7	Noun	system	8	Indefinite article	a	34
8	Adverb	not	7	Copula be	is	33
9	Object pronoun	them	7	Conjunction	if	29
10	Copula be	was	7	Conjunction	that	27

Table 5 demonstrates that the most frequent ten grammatical categories immediately following *however* in BAWE include articles, personal pronouns, conjunctions, copula, and prepositions. On the other hand, when the most frequent grammatical categories occur immediately preceding *however* in BAWE are examined, it can be clearly seen that they consist of copula, pronouns and nouns. Some of the grammatical occur in both position, *however* the position to the right of the conjunctive adverb has more varied grammatical categories. In addition, the frequency of these overlapping categories differs significantly.

From the categories displayed in Table 5, it can be suggested that *however* is mostly followed by elements that form a complete set of sentence after the use of *however*, which signals clause-initial position. Also, it is clear that another conjunction can be used right after *however* in order to form a new clause, which also signals clause-initial position of *however*. However, the frequency of categories preceding the conjunctive adjunct indicates that it is also possible to use *however* in sentence-medial position like after subject or a circumstantial adjunct or stance adjunct, but with less frequency compared to the clause-initial position.

Table 5 reveals that personal pronouns are also used commonly with the conjunctive adverb *however*, but a close analysis of them has indicated that they are in different function. Personal pronouns preceding *however* are mostly object pronouns and they are the end of the previous sentence. Therefore, it can be concluded that *however* right after personal pronouns do not occur as an interrupter in the sentence. On the other hand, personal pronouns following *however* are subject pronouns, which is the start of the second sentence. The examples from (8a) to (8c) display the distinct use of personal pronouns with *however*.

- (8a) ...whole, and so would move linearly with **it**. **However**, the beta in this case is...
- (8b) ... sociology of ongoing critical discussion. **However**, **it** shall presently be argued that...
- (8c) ...should not try to comprehend **them**. **However**, the assertion that the concentration...

Another interesting point that can be inferred from Table 5 is that the pattern ‘*however + noun*’ is not actually observed commonly in academic written discourse. The collocations of *however* were specifically analyzed for this pattern, and it was revealed that there were only two examples of ‘*however + noun*’ pattern that occurred more than ten times in the 6-million corpus. On the other hand, the pattern ‘*noun + however*’ seems to be quite frequent in BAWE compared to the previous pattern. Another interesting result concluded from the Table 5 is the use of copula *be* both preceding and following the conjunctive adverb *however*. Their frequencies in both positions are not very different, so it can be claimed that it is very common to use copula *be* with *however* in academic written discourse. The following examples from (9a) to (9h) show the use of copula *be* with *however*.

- (9a) ...later see. The intention of the book, **however**, **is** not very clear at the outset...
- (9b) ...Americans they do not give up. **This**, **however**, **is** not a direct link towards Nazism...
- (9c) ...of disordered eating for male students. **It is however** important to stay within the...
- (9d) ...claims of infringement against Linux. **This is, however**, comparable to proprietary...
- (9e) ... or deny them anything they ask'. **There is, however**, a subtle distinction to be made....
- (9f) ... performance. Social loafing **is, however**, unlikely to occur in highly collective...
- (9g) ...al the company would receive. **There are, however**, a few problems with this option...
- (9h)...mmigrant-dominated society. **This was, however**, merely a constructed and idealized...

All the examples above also shows that ‘*this*’, ‘*it*’, ‘*there*’, which are the other frequent collocates of *however* occur mostly together with copula *be* both in the preceding and following positions.

The final collocate to be examined within the framework of this study is the occurrence of *that* with *however*. The pattern verb+ *however*+ *that* is a quite frequent pattern in BAWE as illustrated in the examples from (10a) to (10c). It can be argued that using *however* after a verb is also common in academic written discourse. The use of passives and the use of modals with the pattern ‘verb+ *however*+ *that*’ are quite

essential for the formation of these collocates as displayed in the examples. Another pattern that occurs relatively frequently in BAWE is the pattern ‘adj+ *however*+ that’ as in the examples from (10d) to (10f). However, this pattern is not as common as ‘the verb+ *however*+ that’ pattern.

- (10a) ...be more appropriate. It should be **noted, however, that** the test of everyday attention...
- (10b) ... an audio stimulus. One could **object, however, that** performance in a very simple...
- (10c)... vely. It is important to **acknowledge, however, that** throughout the development ...
- (10d) ...agmented workforce. It is **certain, however, that** ideological divisions continue to...
- (10e) ...edent to his advantage. It is **possible however, that** the court would find, as they...
- (10f) ...ly difficult to find. It is **unlikely however that** this difficulty was sufficient to pro...

Cluster Analysis of However in BAWE

Scott (1997) defines clusters as a short chain of words (between two and six words) that frequently co-occur. They help to identify the contexts a particular word occurs frequently. By identifying the clusters of *however*, it would be possible to reveal frequently occurring contiguous words that constitute a phrase or a pattern of use with *however*. Since two-word clusters revealed only pronouns preceding and following *however* and five-word clusters seemed a continuation of four-word clusters, the present study investigated the three-word clusters and four-word clusters constituted with *however*. Four-word clusters appear mostly as the continuation of three-word clusters like ‘however, it is and however, it is not’. When the clusters were examined, it was revealed that the same cluster could appear twice due to the differences in punctuation (e.g. ‘however, there is’ and ‘however there is’) as illustrated in Table 6. These same clusters were also included in the cluster table, but they are not handled separately while exemplifying the clusters. Also, the range that each of these clusters occurred was quite large in number as seen in Table 6.

Table 6. Three-word clusters and four-word clusters with a minimum frequency of 5 in BAWE

	Three-word cluster on the right	N/ million	Range (n=2761)
1	however, it is	50	42

2	however it is	24	20
3	however, there are	19	17
4	however, there is	18	16
5	however, this is	15	14
6	however, in the	11	10
7	however, as the	9	8
8	however, it was	8	8
9	however there is	8	7
10	however this is	8	7
11	however, it is not	7	7
12	however, due to	7	7
13	however, if the	7	7
14	however there are	7	6
15	however, this is not	7	6
16	however, it has	6	6
17	however, according to	5	5
18	however, it is important	5	5
19	however, there was	5	4

Table 6 illustrates the three-word clusters and four-word clusters occur with a minimum frequency of five per million words in BAWE. It was found out that the three-word clusters and four-word clusters that appear at least five times in BAWE suggest that *however* has certain patterns in academic written English and these patterns occur with differing frequencies across BAWE. In addition, the number of ranges all these clusters occur is also quite high with a minimum occurrence across four ranges. While the conjunctive adverb *however* has collocates on the left as well, cluster analysis revealed that there were not any clusters on the left that recurred more than five times per million words in BAWE. Therefore, the analysis indicated that the cluster of *however* in academic written English is mostly on the right of *however*. It can clearly be seen from Table 6 that clusters of *however* were similar to collocates of *however* which was analyzed in the previous section. One interesting finding was that the most frequent cluster of *however* is ‘however, it is’ with a frequency of 50 per million words and the second most frequent cluster is ‘*however* it is’ with the only difference in punctuation. Nevertheless, when these two clusters are compared, it can be stated that ‘however, it is’ is twice as much as ‘*however* it is’ indicating that the one in which *however* is followed by a comma is far more frequent in academic written English. Since their only difference is in punctuation, these two clusters are not exemplified separately in the figures below. When the concordances of both clusters were analyzed, it was revealed that although there were also patterns like ‘*however*, it is + noun’ and

‘however, it is + verb’, the pattern ‘however, it is + adjective’ was a far more common pattern with a frequency of 28 out of 50 occurrences as can be seen in Figure 1. Actually ‘*however, it is important*’ is another cluster that has a frequency of five and ‘*however, it is important to*’ is also another cluster with a frequency of four in BAWE although it is not stated in the table because of the frequency limit. Therefore, it can be concluded that ‘however, it is +adjective’ is the most frequent pattern of *however* in academic written discourse as can be seen in figure 1.

e population.</quote> <fnote>Figes, p. 460 </fnote> However, it is far more likely that the party which most closely matched their aims. However, it is important to remember that 'the lately had 70 natives here, now only about 20.' However, it is important to note that this farming conditions and the disgrace of Porter. However, it is important to recognise that the , The German Nation and Luther, p. 113 </fnote> However, it is important not to get caught more dynamic middle sections of French society'. However, it is essential to note that the White] had hoped for made the journey." However, it is understandable that the government Birth of the Modern World, pp. 49 - 50. </fnote> However, it is worth pointing out that 'primacy are at a physical and intellectual disadvantage. However, it is possible for these birth order than a result of poor peer acceptance. However, it is equally plausible that rejected chi

Figure 1. Concordance lines of the cluster ‘however, it is’

In addition, the cluster ‘however, it is’ is also followed by the adverb ‘not’ to make the statement negative commonly, therefore ‘however, it is not’ is also another four-word cluster formed with *however* with an occurrence of seven per million words in BAWE as illustrated in Figure 2.

' suggest that God grants us these rights. However, it is not so apparent that this rengthen the legitimacy of the expulsion process. However, it is not compulsory, as "natural justice to the environment must bear the costs". However, it is not failsafe at protecting the r supporting communications with their customers. However, it is not clear whether or not of R- (+) Pulegone in the sample but however, it is not very pure as there

Figure 2. Concordance lines of the cluster ‘however, it is not’

Another important pattern of *however* occurs with ‘there is/there are’ structures. Pronoun ‘there’ is one of the most common collocates of *however*, as revealed in the previous section, and it also forms three-word clusters with *however* as can be seen in Figure 3 and Figure 4. ‘However there is’ and ‘however there are’ appear again with lower frequencies in the table again with the only differing point in punctuation. Therefore, these clusters are not exemplified differently, too.

be determined as a metallic strain gauge. *However, there are* other types of strain gauges as a 'golden rule' for sequence alignment. *However, there are* often found useful information in the eighteenth and Seventeenth Century Europe, p. 52. *However, there are* certain limitations to this argument for patients who have undergone breast augmentation. *However, there are* obviously further benefits of using the London School of Economics. *However, there are* some problems with analyzing the intellect (Representative theory of perception). *However, there are* cases in which these simple ideal is actually never reached by anyone. *However, there are* some themes in the book that its approach consistent with the EC's. *However, there are* some fundamental shortcomings of the model to fall as per capita income decreases. *However, there are* possible ways to break out

Figure 3. Concordance lines of the cluster 'however, there are'

As required by the structure, the cluster 'however, there is' is normally followed by a noun. However, the interesting point about this cluster is that if the statement is negative, this cluster is not followed by the adverb 'not' but the determiner 'no' in all cases to make the statement negative as can be seen in Figure 4. This is also same with the cluster 'however there is', which only has a difference in punctuation.

the increase in stress experienced by caregivers. *However, there is* very little current research on the lofty aims the pursue." For dialectics *however, there is* no contradiction between means a has recovered well from the slowdown in 2001. *However, there is* still a lack of trust whole new theory is attempted to explored. *However, there is* a problem with falsification as qualities, bulk, figure and motion of parts. *However, there is* one important point that I of how stabilisation policy can go wrong. *However, there is* no doubting that if used plays an active role in the group, *however, there is* no evidence that this group

Figure 4. Concordance lines of the cluster 'however, there is'

Another cluster formed with the conjunctive adverb *however* is 'however, this is' with an occurrence of fifteen times. When concordance lines were examined in detail, it was revealed that this cluster is frequently followed by the adverb 'not' to make the statement negative with an occurrence of seven times, which is almost half of all the occurrences of the cluster. Therefore, the pattern 'however, this is not' is a four-word cluster of *however* with a frequency of seven as illustrated by Figure 5.

that prices are flexible in all countries. *However, this is not* true. So far, the normality test due to an outlier (Ireland). *However, this is not* a problem as I which are not normally considered (Furnham, 2000). *However, this is not* the only multi-layer apply and normally produce the correct outcome; *however, this is not* the case all of >Given the strength of regional ethnic ties *however, this is not* to credit the authorities obtained in the actual 'Opposite Worlds' tasks. *However, this is not* unexpected, as it would threat of "Islam" is an unlikely notion. *However, this is not* to deny that fundamentalist

Figure 5. Concordance lines of the cluster 'however, this is'

The next cluster of *however* is 'however, it was', which had a frequency of eight per million words. The interesting point in this cluster is that it is mostly followed by a

verb in contrast to the cluster ‘however, it is’ which was usually followed by an adjective. Out of the total 8 occurrences of the cluster ‘however, it was’, four of them had the pattern ‘however, it was+ verb’ as can be seen in Figure 6.

een-yellow, allowing for efficient visualisation. *However, it was* found after experimentation that a
 rpillar tracks and early designs for helicopters. *However, it was* not until the 1950s that
 ommissions notice was firstly introduced in 1996. *However, it was* revised and issued in February 200
 rence in mental rotation ability amongst artists. *However, it was* also discovered that males made
 es Act, attempting to regulate private madhouses. *However, it was* largely ignored and licences of
 ed neurasthenia because this pleased the patient. *However, it was* regarded as ‘the newest garbage
 pment of the nation” (Inkeles and Diamond, 1980). *However, it was* also found that once an

Figure 6. Concordance lines of the cluster ‘however, it was’

The next cluster that indicates an interesting result is the cluster ‘however, it has’. At first glance, it may be thought that this cluster is most probably in present simple and is followed by a noun. However, the analysis revealed that the cluster ‘however, it has’ is mostly followed by a past participle verb, which turns the tense of the whole statement present perfect as illustrated in figure 7. Therefore, it can be stated that *however* is frequently used with present perfect tense following present simple and past simple. The total occurrence of ‘however, it has’ is six times per million words, and ‘however, it has’ is followed by a past participle verb in five of these occurrences.

ording does not altogether eliminate oppression; *however, it has* enabled oppression to be more
 s, particularly for foreign-invested enterprises. *However, it has* also surely meant a spread
 itself guilty of using orientalist constructions. *However, it has* attempted to distance itself from
 <fnote>Buchanan and Huczynski (2004), 368 </fnote> *However, it has* been found that conformity with
 public domain (Marwick, p148). For conservatives *however, it has* become a scapegoat to blame

Figure 7. Concordance lines of the cluster ‘however, it has’

The last cluster of *however* with a minimum frequency of five per million words reveals an interesting result as well. The analysis suggested that the cluster ‘however, there was’ is almost always followed by a noun, but when the statement is negative, this particular cluster is mostly followed by the determiner ‘no’ to make the statement negative forming another cluster ‘however, there was no’ with an occurrence of three out of five occurrences as illustrated in Figure 8. When the use of ‘however, there was’ with the adverb ‘not’ was compared to the use of ‘however, there was’ with the determiner ‘no’ to make the statement negative, it was clear that the latter was far more common in academic written discourse.

the rigours of the plantation work schedule. *However, there was* a distinct need for homogenizat
jail to aid and publicise the movement. *However, 'there was* another King unknown to the
be an adequate measure of spatial abilities. *However, there was* no difference found in the
magazine towards the end of the nineties; *however, there was* a slump in the lad
flow 2-3 than in patients with TIMI flow 0-1. *However, there was* no significant difference betwe

Figure 8. Concordance lines of the cluster ‘however, there was’

However in BASE

The analysis of *however* in BASE revealed that, unlike in written academic English, *however* is not used only as a concessive (11a) or adversative (11b) conjunction in spoken academic English. In addition to its function as a conjunction, a quite common use of *however* is as an adverb used to say ‘to whatever extent’ (11c). However, since it is the aim of this study to examine *however* in general rather than as a conjunction specifically, the word was studied with both meanings all through the collocation or cluster analysis. The examples below are taken from BASE to display the three different *however* use.

- (11a) ... the belief that the word or language er is the foundation of thought and experience **however** in recent times this concept of logocentrism the central aspect of the word has been er criticized notably
- (11b) ... it's true that Mark Twain was born and grew up before the Civil War **however** he wrote all his fiction after the Civil War...
- (11c) ... that's what this diagram takes account of because here it says look **however** good your recycling some of these wastes are going to end up in the environment...

Collocation Anaysis of However in BASE

Collocations, also known as multiword lexical units, can be considered to be a rather problematic issue for language learners, but at the same time they are key to success in language skills, especially in spoken fluency (Lewis, 1997). Therefore, it was thought that an analysis of the immediate surrounding context of *however* would be worthwhile to provide learners with examples of real life language. As BASE is not a very large corpus, the minimum frequency was determined as three, which meant that each word had to occur before or after *however* at least three times. The table below displays the most frequent ten words that precede and follow *however* with their grammatical functions.

Table 7. Ten most frequent word-class colligates of *however* in BASE

Left colligates			Right colligates		
Word class	Collocate	F/million	Word class	collocate	F/million
1. Interjection	er	9	Definite article	the	10
2. Copula	is	6	Conjunction	if	10
3. Conjunction	or	3	Copula	is	8
4. Conjunction	and	2	Interjection	er	8
5. Conjunction	whereas	2	Personal Pronoun	you	7
6. Adverb	n't (not)	2	Adverb	much	7
7. verb	do	2	Adverb	many	7
8. Conjunction	but	2	Personal Pronoun	it	7
9. Conjunction	if	2	Preposition	in	7
10. Noun	question	2	Conjunction/ determiner/ pronoun	that	7

When the words that appear in the immediate surrounding of *however* in academic spoken English are examined, it is possible to list word classes as interjections, conjunctions, personal pronouns, adverbs, copula, a verb, a preposition and the definite article as its collocations. However, as the results come from BASE which consists of 1.742.886 words, of which only 305 include *however*, the frequencies of these words are quite low. Therefore, it is important to be cautious about making broad generalizations about these collocations.

Before taking a closer look at each specific word, it is possible to draw some conclusions about the left and right colligates of *however*. To begin with, it appears that conjunctions dominate the preceding position as the word class, but a majority of the examples are with its 'to whatever extent' meaning rather than expressing contrast. When it comes to the immediate right collocates, a more diverse word class grouping emerges. Another fact that is revealed by the analysis is that the frequencies for the colligates in the preceding position is quite low when compared to the colligates in the following position. Based on this, it is possible to argue that the word *however* collocates more frequently with words following it and forms less fixed expressions with words coming right before it.

In the left colligates table, it is seen that the most frequent word that comes right before '*however*' is 'er' which is an interjection signaling hesitation. Although it is not at the top of the list, 'er' is on the right colligates list, as well, and it is slightly less common than the preceding position. The frequency of this exclamation marker seems to be directly related to the nature of spoken language and has importance to show us

that even in academic spoken discourse, which is thought to be a pre-planned and organized speech, speakers need time to stop and think in the course of their speech and it is not very easy to keep to the written mode. Furthermore, it is an interesting finding that in all the examples of *however* after ‘er’, *however* functions as a contrastive conjunction, not as an adverb meaning ‘to whatever extent’. Thus, it can be inferred that the interjection ‘er’ appears before introducing a contrastive idea.

(12a) ... probably treat it for the rest of their life **er however** there are some indications where you'll...

(12b) ... she's had a previous fall before **er however** she's hypothyroid so she's likely to be overweig...

The second word on the left colligates list is the copula ‘is’ which is also on the third line in the right colligates list, but when the frequencies are concerned, the copula in the following position turns out to be more common. Both uses of the copula with *however* indicate a sentence-medial position for the conjunction. In the preceding position, patterns like ‘it+ is+ *however*’ (13a), ‘there + is+ *however*’ (13b) and ‘which+ is+ *however*’ (13c) can be seen, when in the following position the pattern ‘*however*+ is+ that’ (13d) seems to be more typical.

(13a) ... the art of the past and how it developed over time now it **is however** possible to give an acco...

(13b) ...those differences as well there **is however** another feminist approach which and this is quite...

(13c) ... and all the rest of it that horrible side of the revolution which **is however** effective...

(13d) ... the assumption **however is** that the dominant firm has lower costs to start with if and...

When the conjunctions in the left or right colligates list are considered, a closer look at the concordance lines reveals that in the cases where *however* collocates with ‘or, and, whereas, but’, *however* means ‘to whatever extent’. The words ‘but’ and ‘whereas’ are two conjunctions that express contrast. The reason why they collocate with *however* may be because in order to indicate contrast in sentences including *however* with its ‘to whatever extent’ meaning, other contrastive conjunctions are needed to avoid repetition and misunderstanding. The concordances below exemplify the use of *however* with these conjunctions.

(14a) ... and then you'd have sixteen **or however** many you need you could have an F-R filter...

- (14b) ... let's face it whatever you think about this **and however** out of date it is er gender is extremel...
- (14c) ... published in accordance with the First Directive yes **whereas however** certain derogations...
- (14d) ... it's a terrific read and all the rest of it **but however** good it is historians are probably better at...

On the other hand, the conjunction 'if' both precedes and follows *however* in contexts where *however* also functions as a conjunction and thus, they strengthen the meaning of contrast together with the existence of a conditional case. The following examples show how 'if' collocates with *however* in the preceding and following positions.

- (15a) ...**if however** er you look at some er feminist analyses of prostitution they would disagree with...
- (15b) ... **however if** the patient died and it was found that the practitioner was unlicensed he could be...

The adverb 'n't (not)' preceding *however* is not an unexpected result because in the cases where *however* indicates contrast, it is quite natural for one of the clauses to include a negative statement, but what can be surprising is that 'n't' does not seem to be very frequent in the following position. The two examples below display how 'n't' is used before *however*:

- (16a) ... but they're good still because they ask for supervision and advice some don't **however**...
- (16b) ... if you don't **however** vote for it er then basically you're out you wha-, you haven't got the...

Another word that frequently appears in the surrounding context of *however* is the definite article 'the' in the immediate right side position. This pattern implies us that *however* is followed by a noun and the definite article 'the' actually precedes that noun. Another possible use of 'the' is may be because the word following 'the' has already been mentioned in the first one of the clauses combined with *however* or even before in the context.

- (17a) ... undefendable form of self-defence **however the** weakness of the dialectic was strengthened...
- (17b) ... strict immigration controls in Britain **however the** problem remains that there are still black...

Furthermore, the personal pronoun ‘you’ is another common word that appears right after *however* and when the examples are examined through concordancing, it is clear that in academic spoken language the subject pronoun is used as ‘the people in general’ rather than referring to a specific person. Similarly, the personal pronoun ‘it’, which is among the right colligates of *however*, is mostly used as a dummy subject.

(18a) ... they've got menorrhagia er once you get over a certain age **however you** don't er have period...

(18b) ... **however it** has also been suggested that it may be a deliberate process which may be genetic...

‘However+ much’ and ‘however+ many’ are two other recurring patterns in which *however* means ‘to whatever extent’. ‘however+ many’ is usually followed by either a plural noun or a subject pronoun. ‘However+ much’, on the other hand, is mostly followed by a subject pronoun:

(19a) ... we can have **however many** goods that the consumer has available to them so we need to...

(19b) ... then you'd have sixteen or **however many** you need you could have an F-R filter running in...

(19c) ... **however much** you may think that st-, statistics is very difficult once you're doing a big com...

As the only preposition in the list, ‘in’ has different functions after *however* like being used before time expressions (20a) or in some fixed phrases (20b) as exemplified below:

(20a) ... did not sign it were Japan and the USSR **however in** 1942 the Japanese gave a qualified pro...

(20b) ... **however in** this case the court did indicate to us that there's certain things they would take...

‘that’ is in the most frequent ten words which collocate with *however*, but it does not have the same function in all of the examples. It functions as a conjunction (21a), a determiner (21b), or pronoun (21c) in the way they are shown below:

(21a) ... this does not mean **however that** i think the novel is broken-backed or lacking in continuity...

(21b) ... **however that** village over there is a big village and the one where you're in one well you onl...

(21c) ... which is really renal artery disease **however that's** very much age-related the older the patie...

Cluster Analysis of However in BASE

Foreign language learners need chunked expressions to gain native-like fluency. They help language learners to save their cognitive effort and enable them to use the language in an immediate need by serving as an available source of language (Shin & Nation, 2007). Therefore, a cluster analysis was conducted across BASE to discover the most common cluster patterns formed with *however*. For the analysis, the minimum frequency and range were determined as three and the cluster size ranged from three to five words. The term was searched both on the left and the right positions. The table below displays the findings from the analysis:

Table 8. The results of the cluster analysis of *however*

<i>however on the left</i>		<i>however on the right</i>	
Cluster	F/million	Cluster	F/million
1. however much you	3	it is however	3
2. however that's	2	there is however	2
3. however good you	2		
4. however good you are	2		
5. however good your	2		
6. however if we	2		
7. however if we are	2		
8. however if you	2		

As can be understood from the table, when *however* is on the left, more clusters are formed, but similar to the written corpus, the four-word clusters are formed by the extension of the three-word clusters. When *however* is on the right, only two clusters emerge when the frequency limit is three. When the sentences in the concordance lines are examined, it is seen that the personal pronoun 'you' in the clusters means 'the people in general' in the cluster. This could be because academic speeches are not personal talks and general statements usually dominate speeches of that kind. However, it is important to note that, as was the case in collocational analysis, it is difficult to generalize the use of these clusters due to the limited number of all *however* examples in BASE. However, it is still possible to draw some conclusions as to how *however* behaves in context.

In clusters 1, 3, 4 and 5 in the first column, *however* means 'to whatever extent' and the most frequent cluster is 'however much you'. The cluster is followed by a verb, or a modal + verb. Interestingly, 'however many' does not take its place in the cluster

list although it was right after ‘however much’ in the table displaying collocation analysis. This may be because the use of ‘however many’ is limited to plural nouns in the following position, whereas ‘however much’ can precede subject pronouns or modal verbs. Below are two examples for ‘however much you’ cluster:

- (a) ... a futile attempt because **however much you** measure **however much you** try to order the world...
- (b) ... you can't consume less than zero of a good **however much you** hate it...

‘however good you’ and ‘however good you are’ are two almost identical expressions. The only difference is the presence of the copula in the latter. In the concordance lines, two of the sentences are followed by a preposition (a) and one is followed by another clause (b). ‘however good your’ is also a similar pattern, but since it ends with a possessive adjective, it precedes a noun (c).

- (a) ... **however good you are** at recycling your waste you can never recapture the whole amount of ...
- (b) ... **however good you are** the chances are is that A you will not be reviewed and B your work w...
- (c) ... **however good your** dictionary is it cannot define everything without some kind of circular def...

In clusters 2, 6, 7 and 8 in the first column, *however* is used as a conjunction to indicate contrast. ‘however that’s’ is the second most frequent cluster and the pronoun ‘that’ is usually used to refer to a statement or expression in the previous clause (a). The other common patterns like ‘however if we’, ‘however if we are’ and ‘however if you’ are very much alike in their use and meaning. In the clusters where they are used together between two sentences, they indicate a contrastive case depending on a condition (b, c). The following sentences illustrates each:

- (a) ... fifty per cent stronger than a A-T base pair **however that's** not the only thing that holds the...
- (b) ... **however if we're** going to use that to reflect hopefully some people after they look at that...
- (c) ... **however if you** don't vote for it er then basically you're out you wha-, you haven't got the...

As for the two clusters emerging in the right side of ‘however’, it is possible to say that both are used to express contrast. Although it is difficult to comment on the

semantic position of ‘however’ in BASE due to the lack of punctuation marks, they signal a sentence-medial position.

- (a) ... *it is however* difficult to suggest a circumstance this advice was thought to be necessary...
- (b) ... *there is however* a well-known and equally ancient retort if the heavens fall justice won't ...

In the light of the corpus analysis conducted, when all the collocations and clusters are taken into consideration, it can be said that the clusters are quite similar to the collocations of *however*. The two-word clusters are the same as collocational patterns, and the four-word clusters are extensions of the three-word clusters. Moreover, as it is mentioned before, the frequencies for the recurrent patterns are not very high because the total number of *however* use in BASE is 305 and this makes it difficult to generalize the results over spoken academic discourse. However, it still provides us with meaningful results to gather insight as to the British academic spoken language in that *however* is not a highly preferred conjunction in academic spoken discourse and that most of the clusters including *however* are extensions of collocations or shorter clusters.

Conclusion

This corpus study was undertaken in order to investigate the use of *however* in corpora of BAWE and BASE. Although the linking adverbial/conjunction *however* has a significant role in academic registers, there have been no studies focusing specifically on *however* in academic written and spoken discourse. We have obtained comprehensive results proving that *however* is one of the most common linking adverbials particularly in written discourse, and it is “uniformly preferred to mark contrast in academic prose” as Biber et. al. (1999,p.889) stated. In addition, findings of this study based on the frequency, position, collocation, and cluster analyses of *however* provided complete information about this linking adverbial which is generally not presented in pedagogic grammar or academic writing books.

The major findings of this corpus study on *however* are as follows. First, analysis of the frequency of *however* revealed that *however* is a typical connector in BAWE and it was found that *however* in BAWE (n=1829) is ten times more common than in BASE

(n=175). This difference of frequency was expected which can be attributed to the more expressive nature of academic writing.

Second, positional distribution of *however* functioning as either adversative or concessive connector in BAWE Corpus revealed that the most common position for *however* is initial. In academic written discourse, the second highest proportion of *however* is medial position while final position is the least preferred. The analysis of *however* in BASE revealed that, unlike in written academic English, *however* is not used only as a conjunction in spoken academic English; the use of *however* as an adverb meaning “to whatever extent” was quite common instead. Additionally, no punctuation mark is seen in spoken academic discourse. Therefore, positional distribution of *however* in BASE falls out of the scope of this study.

Third, analysis of the words occurring immediately to the right and to the left of *however* displayed collocations in which most common grammatical categories are copula *be*, pronouns, and nouns respectively. *However* is mostly followed by elements that form a complete set of sentence after the use of *however*, which signals clause-initial position again. Considering patterns, the pattern *noun + however* seems to be quite frequent in BAWE compared to the pattern *however + noun*. Moreover, it can be claimed that it is very common to use copula *be* with *however* in academic written discourse. Another pattern that occurs relatively frequently in BAWE is the *verb+ however+ that* pattern. Collocation analysis in BASE proposed that *however* is followed by interjections, conjunctions, personal pronouns, adverbs, copula, a verb, a preposition and the definite article, respectively. The most frequent word that comes right before *however* is ‘er’ while it is slightly less common in following position. The frequency of “er” as an interjection signaling hesitation seems to be directly related to the nature of spoken language and speakers’ need for some time to stop and think in the course of their speech. In addition, interestingly all the examples of *however* after ‘er’, it functions as a contrastive conjunction rather than an adverb.

Finally, cluster analysis of *however* in BAWE suggested that *however* has certain patterns such as *however, it is*, *however it is* and *however, there is/are* in academic written English and these patterns occur with differing frequencies across BAWE. Notably, as *however, it is* and *however it is* patterns suggested that punctuation

rules are not followed strictly in writings. Also, it was found out that the four-word clusters of *however* occurred mostly as an extension of the three-word clusters. When the concordances were analyzed it was revealed that, tense of the sentence may be effective in what follows *however*, that is ‘*however, it is + adjective*’ was found to be the most frequent pattern of *however* while ‘*however, it was + verb*’ was the most common pattern of *however* in academic written discourse. The cluster analysis also indicated that *however* is frequently used with present perfect tense following present simple and past simple tenses in academic written English. Similar to the written corpus, the four-word clusters are formed by the extension of the three-word clusters in BASE. Cluster analysis of the spoken academic discourse revealed that *however much you + verb/modal verb* is the most frequent pattern.

This corpus study was limited in several ways. First, only *however* has been investigated and comparison of BAWE and BASE for the use *however* was not included due to the different sizes of spoken and written corpus. Besides, the total number of *however* use in BASE is 305 which may not be representative of whole spoken academic discourse. The second limitation is that because no punctuation mark is seen in spoken academic discourse, analysis of positional distribution of *however* in BASE falls outside of this study.

Suggestions for teaching discourse connectors may be considered as valuable within the field of EAP. The traditional presentation of conjunctions in tables and lists without providing any information and practice regarding multiple semantic functions and positions of them in clauses should be replaced with corpus based practice/tasks and data driven learning activities. Corpus studies should be taken into consideration while designing syllabus and materials particularly for ESL/EFL students. Sample activities 1, 2, and 3 adopted from Cowan (2004, p.631-633) are presented for EAP teachers in nonnative contexts. These activities were adopted for presenting and practising *however* to EFL/ESL students with upper-intermediate and advanced level of proficiency (For the activities, see appendix). We hope that further corpus linguistics studies will shed light on other conjunctions such as *nevertheless, yet, but, and in contrast*. Furthermore, a comparative corpus study between a nonnative academic

written or spoken learner corpus such as Turkish and BAWE or BASE may be a focus for future studies to improve ESL/EFL learners' writing and speaking skills.

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