Cohesive Conjunctions in Applied Linguistics Research Articles among Iranian and Non-Iranian Researchers: A Comparative Corpus-based Study

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Abstract

Cohesion as a major component of language ability plays a significant role in connecting the sentences and paragraphs of texts together. Rare studies, if any, investigated cohesive conjunctions in applied linguistics research articles written by Iranian and non-Iranian researchers. The present study aimed to fill this gap. To this end, one hundred and seventy-five original articles written by Iranian authors, published in the years 2015-2019 in the field of applied linguistics in Scopus-indexed international journals and 174 original articles in the same field written by Iranian and non-Iranian authors with similar indexing features were selected through a purposive sampling method. Then, the frequency of conjunctions and their respective tokens were identified based on the taxonomy provided by Halliday and Hasan (1976). The analysis of the data based on frequency count and chi-square analysis revealed that there was a statistically significant difference between types and their tokens in the two corpora. Moreover, the findings demonstrated that in both corpora additives were most frequently used, while adversative were at the minimum level of application. It may be concluded that non-Iranian applied linguistics research articles enjoy more cohesion than Iranian ones as far as conjunctions are concerned. However, further studies are needed to examine other features of cohesion to substantiate this finding. The present study may have practical implications for both writers as well as EFL/ESL students.

INTRODUCTION

People apply language to communicate together in usual life. Sounds, words or sentences are components of individual units of language. However, these individual units are not used for linguistic communication by people. People

initially and fundamentally communicate with each other by applying the language units which form distinct units of expression. Combinations of the language units are named text in linguistics. But what is text?

About the definition of text, there has not been a definite and perfect one in linguistic field. Different linguists have different opinions. According to Longman Dictionary of Language Teaching and Applied Linguistics, text is a general term for example of language use, i.e. language which has been produced as the result of an act of communication (Namaziandost, Rahimi Esfahani, Nasri, & Mirshekaran, 2018; Richard et al. 1992). Moreover, Brown and Yule (1983) define text as "the verbal record of a communicative act".

In the field of cohesion in English, Halliday and Hasan describe text as "any passage, spoken or written, of whatever length, that does form a unified whole" (Halliday & Hasan, 1976). Text is applying unit of language. It's not described by its size and it's not a grammatical unit such a clause or a sentence. Sometimes a text is seemed to be some kind of super-sentence, a grammatical unit which is larger than a sentence but is related to a sentence as well as that a sentence is related to a clause, a clause to a group and so on; by constituency, the composition of larger units derived from smaller ones. But this is misleading. A text is not such a sentence, just bigger, which is different from a sentence in type. It may be prose or verse, dialogue or monologue. It may anything from a single proverb to entire play, from a temporary cry for help during the entire day discussion on a committee (Halliday & Hasan, 1976). In addition, they propose the concept of texture, which able to identify text and non-text. Halliday and Hasan, (1976) believe that texture includes a semantically text. The passage which consists of more than one sentence is considered as a text. Therefore, specified linguistic features presented in that passage can be recognized as contributing to its whole unity and giving it texture (Namaziandost, Nasri & Rahimi Esfahani, 2019).

Cohesive relation which exists among cohesive items provides texture. Cohesion distinguishes texts from non-texts. Cohesion also enables readers or listeners to make connection between what was said, what is being said, and what will be said, by the proper use of the required lexical and grammatical cohesive devices. Cohesion situates the semantic interpretation of some linguistic elements in speech which depends on each other. It is the basis upon which the mansion of coherence is built (Halliday & Hasan, 1985) and it is a necessary aspect

of a text if it is distinguished to be coherent (Namaziandost, Saberi Dehkordi & Shafiee, 2019; Parsons, 1991). Also, Cox et al. in Palmer (1999) claimed that cohesion is significant not only for the readers in building the meaning from a text but also for the writer in constructing a text which can be effortlessly understood.

In a study conducted by Halliday and Hasan (1976), coherence may be based on external factors such as "reader's background", "context of the situation" and "textual cohesion". They also claim that a text can reach coherence even without intersentence cohesion, so long as semantic signs are accessible in order to reduce readers' background knowledge. Therefore, coherence may additionally be related to the previous knowledge of the readers or "what they know" about subject. It can also be based on readers' cultural background even with no explicit cohesive devices relating to sentences (Namaziandost, Sabzevari, Hashemifardnia, 2018).

In writing articles, students should construct obvious relations between one sentence and the most important factors in order to create a good text. Students should connect statements together properly and in a comprehensible way. Good articles include explicit connections among their different parts, thus what is being said, and what has already been said and what is going to be said are connected in the most fluent, obvious and proper way. Readers should connect sentences together by using cohesive markers to follow the writer's intended meaning. Conjunctions are semantic relations in which the conjunctive element signals how the immediately forthcoming segment of text is systematically connected to the immediately preceding segment. Typology of Halliday and Hasan (1976) include four types of cohesive conjunctions: additive, adversative, causal, and temporal conjunctions. Additive conjunctions include words like *also*, *likewise*, and *moreover*. The category of adversative conjunctions includes such items as *on the other hand*, *however*, and *conversely*. Among the casual conjunctions are *consequently*, *as a result*, and *for this reason*. Temporal conjunctions consist of elements like *next*, *finally*, and *then*.

This study adopts the taxonomy of cohesive relationship provided by Halliday and Hassan to establish relationship within a text. According to Halliday and Hasan (1976), cohesive devices in ELT taxonomy of categories and subcategories are as:

1. Grammatical cohesive devices including:
   - Reference: Pronominal, Demonstratives, Comparatives
   - Substitution: Nominal substitution, Verbal substitution, Clausal substitution
   - Ellipsis: Nominal ellipsis, Verbal ellipsis, Clausal ellipsis
   - Conjunction: Additives, Adversatives, Causal, Temporal, Conditional
2. lexical cohesive devices including: Reiteration and collocation

According to above cases, additives include four types – simple (e.g., and), complex emphatic (e.g., furthermore, in addition, moreover, additionally), appositive (e.g., that is, for instance, thus for example) and comparative (e.g., likewise, conversely, similarly). Adversative can be classified into the adversative proper (e.g., however, although, though, but), the contrastive (e.g., in fact, on the other hand), the dismissive (e.g., in any case), and the corrective (e.g., on the contrary). Causal relation can be generally determined by therefore, consequently, so, hence, that of reason (on this account, for this reason), that of result (as a result, in consequence) and that of purpose (with this in mind, for this purpose), conditional (under the circumstances) and respective (with regard to this, in this respect). The various types of temporal are simple (before that, afterwards, earlier, previously, then), conclusive (at last, finally, in the end), sequential (first…. then, first…. next, secondly, first…. second) and summary (in short, to sum up, briefly) (Gholami, et al. 2012, p 294; Namaziandost & Ahmadi, 2019).

Conjunctions are the clearest signs to limit the interpretation of a semantic relation in order to be well perceived (Dooley & Levisohn 2001). One of the most important obvious markers of coherence is conjunctions. In this study, the researchers will survey applied linguistics articles written by Iranian and non-Iranian authors to receive a deeper insight into cohesive conjunctions which are mostly used in these articles. The researchers will compare these two corpora. Surveying how these features act in an academic text to provide cohesion may lead to new progresses for specific aims of teaching English.

In order to gain more insights into the cases regarding cohesive devices used by native and non- native authors in writing applied linguistic articles, the current study aims to survey the use of conjunctions as one category of grammatical cohesive devices in applied linguistics articles written by native and non-native authors in the years 2015-2019 in international journals.

Research Questions

RQ1. Which cohesive conjunctions in the selected corpora (applied linguistics articles written by Iranian authors and those articles written by non-Iranian authors) have a higher frequency?

RQ2. Is there any significant difference in using cohesive conjunctions in the two sets of articles (applied linguistics articles written by Iranian authors and those articles written by non- Iranian authors)?

THEORETICAL FRAMEWORK

The findings of most previous related studies present two important areas of concern: first, the relationship between the use of explicit cohesive devices and writing quality and second, the practical role of cohesive devices as related to the generic structure and general purpose of the text. Furthermore, cohesion is used as a device as part of text-forming component in the linguistic system by which the structurally unrelated factors are connected together through dependence of one factor to the other for interpretation. Applying of cohesive devices has been studied from contrastive points of view. Vahiddastjerdi and Taghizadeh (2006) investigated their application in Persian texts and their translation to English in contrast. They considered aggregate use of discoursal factors in Saadi's Gulistan. They followed the model of Halliday and Hasan (1976) in their study. The findings of their study represented that there were some differences among English versions.

Gholami, et al. (2012) surveyed conjunctions as one category of grammatical cohesive devices in research papers on biomedicine and applied linguistics written by Iranian authors. In the field of applied linguistics nineteen original articles were published in the years 2008-2011 in Scopus indexed international journals and 19 original articles in the field of biomedicine with similar indexing features were selected and the frequency and types of conjunctions were comparatively analyzed. The chi square analysis was used to assess differences in the use of conjunctions between the two types of articles. A statistically significant difference between two types of articles in the use of conjunctions was shown in this analysis. It was observed that the conjunctions were used more frequently by biomedical researchers compared to applied linguistic ones. In addition, both biomedical and ELT researchers attended to employ these

connecting words in non-sentence initial positions compared to sentence initial positions. It may be resulted that biomedical articles enjoy more cohesion compared to applied linguistics research articles until conjunctions are concerned.

Fallah and Rahimpour (2016) surveyed the effect of cohesion on readability and as a result, on comprehensibility of the texts. The result of the study indicated that though there is no considerable difference between utilizing cohesive devices in three translation groups, the texts translated by SaTs were more difficult to read and less comprehensible compared to the translated texts by ST and GT.

As it was mentioned prior in this study, the researchers intend to compare applying conjunctions in research articles of applied linguistics written by Iranian and non- Iranian authors in a corpus of 348 applied linguistics papers by adopting the taxonomy of cohesive relationship provided by Halliday (1976) and Hassan in order to generate relationship within a text. The researchers contrasted applying cohesive conjunctions in two sets of articles so as to realize which one contains a higher frequency, whether there is correspondence between these two sets of high frequent cohesive conjunction, and if there is any considerable difference in applying the cohesive conjunctions in two corpora.

RESEARCH METHODOLOGY

The Corpus

The corpus comprised of 348 applied linguistics research articles written by Iranian (N=174) and Non-Iranian (N=174) researchers. The selected research articles were drawn and downloaded from the International journals of applied linguistics indexed in Scopus Database published between 2015-2019. To make the corpus data comparable, all of the chosen articles were matched in length. Textanz, AntConc, and Word List Expert softwares were utilized for calculating the frequency of conjunctions. These softwares are the advanced letter and word frequency counters. Table 3.1 presents information about the corpora size and sampling.

Table 1

Description of Two Corpora

Corpus	Number of articles	Number of words
Non-Iranian authors	174	1584076
Iranian authors	174	1143652

Data Collection Procedure

Two corpora were used in this study. One corpus was made up of 174 published applied linguistics research articles written by Non-Iranian authors and the other was a 174 corpus of applied linguistics research articles written by Iranian authors. Non-Iranian applied linguistics articles corpus published between the years 2015 to 2019. They were mainly downloaded from journals like Applied Linguistics (Oxford Academic - Oxford Journals), International Journal of Applied Linguistics (Wiley Online Library), Research in Applied Linguistics, and Research in Linguistics and Applied Linguistics. It consists of 1,584,076 words. Iranian applied linguistics research articles corpus published between the years 2015 to 2019. They were mainly from journals like Journal of Research in Applied Linguistics (RALs), published by Shahid Chamran University of Ahvaz (Iran), Iranian Journal of Language Teaching Research (IJLTR) published by Urmia University Press, and Language Teaching Research (SAGE publication). This corpus has 1,143,652 words.

It is worth mentioning that all the data was dissected twice by the researchers to maintain a strategic distance from any missteps in distinguishing and figuring the quantity of cohesive conjunctions in the entire corpus. Therefore, this study used intra-rater reliability. In order to find how the frequency of occurrence of the types of cohesive conjunctions is significantly relevant in the two sets of articles samples, the chi-square test for which the significance value was set at 0.05 was employed. The assumptions of chi-square test, i.e. normal distribution and homogeneity of variance were also tested in this study, to check whether they are met or not. The result of test of normality shows that the value is not significant (p>0.05) which emphasizes normality.

As the papers downloaded were in PDF format, the researchers converted them to text format, in order to be recognizable for the next tool that was used in this study, AntConc. For converting Aiseesoft PDF Converter Ultimate Version 3.3.20 was used. Drawing on Halliday and Hasan (1976), Table 3.2 presents some conjunctive words and expressions that enter into cohesion:

Table 2

Types of Conjunctions

Types of conjunction

Additive	Adversative	Causal	Temporal
simple:	*proper*:	*general*:	*simple*:

and, nor, or *complex*:	yet, but, however *contrastive*:	so, because of, thus *specific*:	then, next, afterwards *complex*:
moreover, in	but, on the other hand,	for this reason, as a	at once, this time, the
addition, besides	actually, in fact, at the	result, for this	last time, meanwhile, at
that, additionally *comparative*:	same time *corrective*:	Purpose *conditional*:	this moment, until then *sequential/ conclusive*:
likewise, similarly, on the other hand *appositive*:	instead, on the contrary, at least *dismissive*:	then, under the circumstances *respective*:	at first, in the end; finally, at last *'here and now'/ summarizing*:
I mean, in other	in any case, anyhow,	in this respect, with	up to now, up to this
words, for example, Thus	at any rate	regard to this, Otherwise	point; to sum up, briefly

In the case of this study 100 conjunctions were selected and according to Haliday and Hassan's Model divided to four sub-types; Additive, Adversative, Causal and Temporal. The conjunctions of each sub-type are listed below:

Table 3

Classification of 100 Selected Conjunctions to for Sub-type Cohesive Conjunction Groups

Additive	*and, also, as well, neither, either, or, further, furthermore, in additic besides, additionally, moreover, and another thing, nor, alternatively, other words, by the way, that is to say, that is, I mean, in other word for example, for instance, likewise, similarly, in the same way, on tl other hand, conversely*
Adversative	*yet, though, only, but, nevertheless, however, despite this, all the sam whichever, in any case, that may be, and, on the other hand, at tl same time, as against that, in fact, as a matter of fact, actually, to t the truth, in point of fact, instead, rather, on the contrary, at lea rather, I mean.*
Causal	*So, thus, therefore, hence, consequently, because of this, then, in th case, under the circumstances, otherwise, under other circumstance for this reason, to this end, for, because, in this respect, because, in t respect, in other respects, apart from this*

Temporal	*Then, next, afterwards, at that moment, previously, before then, first, at first, in the end, finally, at last, eventually, at once, soon, next time, next day, meanwhile, all this time, by this time, up until then, next moment, at this point, here, from now on, henceforth, to sum up.*

In the next step, the computer software named AntConc 3.5.8 was used to calculate the frequency of the selected list of cohesive conjunctions that was a list of more than 100 conjunctions. This is the formula used:

Conjunction frequency = (number of different conjunctions / total number of words) * 1000

After that, we conducted a comparative study between the two corpora, considering the frequency of cohesive conjunctions in each corpus. In this section, the details of the quantitative analysis will be presented. Table 4 provides an overview for the data analysis including the related research questions and steps of data analysis.

Table 4

Research Questions and Analysis of Data

Research Question	Objective	Method of Analysis	Steps of Analysis
Which cohesive conjunctions in the introduced corpus have a higher frequency?	Frequency analysis of 100 cohesive conjunctions in the two corpora	Quantitative	1. Dividing the conjunctio according to Halliday and Hasc Model to four sub-types; additi adversative, casual, temporal. 2. Analysis of 100 conjunctions in corpus of Non-Iranian Appl Linguistic Research Articles v AntConc Software.
Is there concordance between these two sets of more-frequent cohesive conjunction?	Comparing the frequency of cohesive conjunctions in Iranian articles with that of Non-Iranian articles	Quantitative	3. Analysis of 100 conjunctions in corpus of Iranian Applied Lingui Research Articles with AntConc. 4. Identifying the frequency of ec conjunction in the related s type group in each corpus. 5. Identification of conjunctions v its specific frequency. 6. Calculating the total frequency the four sub-type groups for ec corpus and have a comparis between two corpora.

| And finally, is there any significant difference in using these two sets of cohesive conjunctions in the two sets of articles? | Comparison of differences | Quantitative | Performing a chi-square test on the findings obtained from answering the second research question |

After calculating these features, the raw data were analyzed through performing chi-square test to see if the differences between cohesive conjunctions in two corpora were statistically significant or not. Chi-Square Test of Independence with SPSS software, version 25 was run for the statistical analysis of cohesive conjunctions. The obtained findings of descriptive and inferential statistics are presented in the following section.

DISCUSSION

Sizes of Two Corpora

Table 5 shows the descriptive statistics for the two corpora; corpus of applied linguistic research articles written by Iranian and Non-Iranian writers.

Table 5

Descriptive Statistics of Two Corpora

Corpus	Number of words	percentage
Non-Iranian	1584076	58.07
Iranian	1143652	41.93
Total	2727728	100

As shown in the table, the two corpora are different in their sizes, so in order to make the research more scientific and the results more convincing, and to make the comparison easy, the method of ratio will be used in dealing with the two sets of figures in the following parts of this section.

Table 6

Descriptive Statistics for Additive, Adversative, Causal, and Temporal Conjunctions in Iranian and Non-Iranian Corpus

	Non-Iranian Corpora			Iranian Corpora		
No.	Additive Conjunctions	Frequency	Ratio* 1000	Additive Conjunctions	Frequency	Ratio* 1000
1	And	12598	7.95	And	6451	5.64
2	Furthermore	9851	6.21	Furthermore	2189	1.91

3	Also	3696	2.33	Also	1439	1.25
4	Moreover	2156	1.36	Besides	289	.25
5	Besides	1061	.66	moreover	219	.19
6	or	512	.32	further	103	.09
7	Similarly	501	.31	Either	89	.077
8	For example	398	.24	Similarly	126	.11
9	Additionally	216	.013	Or	98	.08
10	For instance	165	.103	Additionally	82	.071
11	Neither	151	.095	Nor	23	.020
12	Alternatively	124	.078	Neither	11	.009
13	Likewise	89	.056	Likewise	33	.028
14	Conversely	74	.046	Conversely	19	.016
15	either	51	.032	Alternatively	12	.01
16	Incidentally	9	.005			
17	In addition	11	.006			
18	Further	10	.006			
19	In the same way	1	.000			
20	Nor	7	.004			
21	That is	3	.001			

No.	Adversative Conjunctions	Frequency	Ratio* 1000	Adversative Conjunctions	Frequency	Ratio* 1000
1	However	449	.283	But	581	.508
2	But	458	.289	However	512	.447
3	Only	225	.142	Instead	496	.446
4	Though	98	.061	rather	139	.121
5	Rather	101	.063	Though	84	.073
6	Instead	90	.056	yet	73	.063
7	yet	81	.051	only	70	.061
8	nevertheless	58	.036	Nevertheless	39	.034
9	Actually	46	.029	On the contrary	11	.009
10	Anyway	11	.006	Whichever	2	.001

No.		Frequency	Ratio*1000		Frequency	Ratio*1000
11	Anyhow	0	0			
12	Whichever	0	0			
No.	Casual Conjunctions	Frequency	Ratio*1000	Casual Conjunctions	Frequency	Ratio*1000
1	Thus	723	.456	Because	1012	.884
2	Because	389	.245	Thus	983	.859
3	So	316	.199	therefore	979	.856
4	Therefore	310	.195	So	701	.612
5	Hence	199	.125	Hence	229	.200
6	consequently	97	.061	otherwise	109	.095
7	Otherwise	39	.024	consequently	99	.086
No.	Temporal Conjunctions	Frequency	Ratio*1000	Conjunctions	Frequency	Ratio*1000
1	first	811	.511	Then	901	.787
2	Then	539	.340	First	623	.544
3	finally	193	.121	previously	514	.449
4	previously	136	.085	finally	401	.350
5	Next	112	.070	afterwards	209	.182
6	at last	61	.038	Next	137	.119
7	eventually	18	.011	eventually	81	.070
8	meanwhile	14	.008	Soon	77	.067
9	soon	10	.006	At last	13	.011
10	afterwards	10	.006	meanwhile	10	.008
11	all this time	8	.005	at once	7	.006
12	here	2	.001	to sum up	6	.005
13				all this time	6	.005
14				here	3	.002

The most frequent additive conjunctions in Iranian corpus were "and", "Furthermore" and "also". "Neither", "conversely" and "alternatively" were the least frequent ones. In Non-Iranian corpus "and", "Furthermore", "also", "Moreover", and "Besides" had the highest frequency and "further", "in the same way", "nor" and "that is" were the least frequent ones. So as table 6 shows "and", "Furthermore", and also were the most frequent ones in both corpora.

The most frequent adversative conjunctions in Iranian corpus were "but",

"however", and "Instead". "On the contrary", "whichever" and "Nevertheless" were the least frequent ones. In Non-Iranian corpus "however", "but", and "only" had the highest frequency and "anyway", "anyhow" and "whichever" were the least frequent ones. So as table 6 shows "but"and "only" were the most frequent ones in both corpora.

As table 6 shows "Thus" and "because" were the most frequent casual conjunctions in both corpora and "consequently", "otherwise" and "hence" were among the least frequent ones.

Regarding the temporal conjunctions, as table 6 shows "first" and "then" were the most frequent temporal conjunctions in both Iranian and Non- Iranian corpora and "all this time" and "here" were among the least frequent ones.

Table 7

Frequency of Additive, Adversative, Causal, and Temporal Conjunctions in Two Corpora

Conjunctions type	Corpora	Frequency
Additive	Iranian	9.77
	Non-Iranian	20
Adversative	Iranian	1.75
	Non-Iranian	1.020
Casual	Iranian	3.59
	Non-Iranian	1.30
Temporal	Iranian	2.61
	Non-Iranian	1.20

The hypotheses of the research were: 1) There is not any concordance between the frequencies of cohesive conjunctions in two corpora; applied linguistic research articles written by Iranians and Non-Iranians and 2) There is not any meaningful difference in using these two sets of cohesive conjunctions in the sets of articles. Chi-square was performed and as its details come next, the findings rejected both hypotheses; that is "There is not concordance between the frequencies of cohesive conjunctions in these two sets of articles", and "There is a meaningful difference in using these two sets of cohesive conjunctions in the sets of articles."

Table 8

Chi-Square Test of Independence for Additives

	Value	f	Asymptotic Significance (2-side
Pearson Chi-Square	42607.691ᵃ	34	.000
Likelihood Ratio	48931.647	34	.000
Linear-by-Linear Association	8008.290	1	.000
N of Valid Cases	42867		

a. 9 cells (13.2%) have expected count less than 5. The minimum expected cour
.26.

Chi-square test indicated a significant association between the frequency
of additives in Iranian applied linguistic research articles and frequency of
additives in non-Iranian ones.

Table 9

Chi-Square Test of Independence for Adversatives

	Value	f	Asymptotic Significance (2-sided)
Pearson Chi-Square	3601.742ᵃ	14	.000
Likelihood Ratio	4951.381	14	.000
Linear-by-Linear Association	428.614	1	.000
N of Valid Cases	3624		

a. 2 cells (5.3%) have expected count less than 5. The minimum expected
count is .89.

The results of Table 4.9 reveal that there is a meaningful difference in using
adversative cohesive conjunctions in two corpora.

Table 10

Chi-Square Test of Independence for Casuals

Chi-Square Tests

	Value	f	Asymptotic Significance (2-sided
Pearson Chi-Square	6185.000ᵃ	12	.000
Likelihood Ratio	7889.298	12	.000
Linear-by-Linear Association	2354.499	1	.000
N of Valid Cases	6185		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count
13.07.

The results indicate that there is a meaningful difference in using casual cohesive conjunctions in two corpora.

Table 11

Chi-Square Test of Independence for Temporals

	Value	df	Asymptotic Significance (2-sidec
Pearson Chi-Square	4873.989[a]	22	.000
Likelihood Ratio	6520.197	22	.000
Linear-by-Linear Association	19.200	1	.000
N of Valid Cases	4902		

a. 9 cells (19.6%) have expected count less than 5. The minimum expected count .78.

The results indicated that there is a meaningful difference in using temporal cohesive conjunctions in two corpora.

The current study was an endeavor to scrutinize applied linguistics research articles written by Iranian and non-Iranian authors to achieve a deeper insight into cohesive conjunctions which are mostly utilized and as well as to create a comparison between these in two corpora. After the data gathered, it was revealed that there is concordance between the frequencies of cohesive conjunctions in these two sets of articles.

Furthermore, the findings showed a meaningful difference in applying cohesive conjunctions in the two chosen corpora, i.e., applied linguistics research articles written by Iranian and non-Iranian authors. According to findings of the frequency analysis in both Iranian and Non-Iranian applied linguistics research articles, there was higher frequency in additive sub-type among the four sub-type groups. The Adversatives sub-type had the lowest frequency. In this regard Casuals were in the second rank and Temporals were the third rank in terms of frequency.

The findings of this study are in line with Trebits's (2009), Ketabi and Jamalvand's (2012) studies considering the most frequent and the least frequent sub-type respectively. Anna Trebits (2009) surveyed conjunctive cohesion in English language EU documents. In her research like the current one, additives were by far the most frequent category of conjunctive cohesion. Moreover, it is in line with study of Abdelreheim (2014) on grammatical cohesive devices. According to his findings regarding conjunction sub-types, he reported extended use of the additive (50%). Of the Halliday and Hassan's (1976) point of view; they are by far

the most recurrent of all 'conjunctive relations' (Halliday & Hassan 1976, p. 226). The interpretations agree with Halliday (2004), as he states in English the presence or absence of explicit conjunction is one of the principal variables of English speech. So, in a piece of writing the case which makes a text textures are not the presence or absence of a large number of cohesive items, but it is applying these conjunctive markers properly. Thus, in this regard, the form of speech is expository which requires the writers in a succinct manner to argue and defend a point of view using expository method of text progress.

The conclusions of another study administered by Akindele (2011) declare our experimental results on the cohesion of text through applying connectors. Akindele (2011) studied cohesive devices in two published academic articles in Nigeria. The analysis of the cohesive devices employed in the articles exposed that a speech or text can just be meaningful if various parts be put together to create a united whole. Thus, a text must be preserved together by some linguistic devices to be cohesive. Thus, the different grammatical and lexical cohesive devices relate to the speech to make cohesion and a text function as a single unit.

Our study evaluated the written articles submitted in valid journals; however, another research analyzed the effect of instruction of cohesive devices and also teacher written statements on the betterment of the quality of expository compositions written by Thai postgraduate students. Tangkiengsirisin (2010) analyzed 60 written pre-test and post-test articles by both experimental and control group by Halliday and Hasan's (1976) taxonomy. The results of the study exhibited a considerable progress in writing cohesion of the experimental group, mainly referential, conjunctive and lexical cohesive relations. Thus, it can be claimed that cohesion of a text can be modified by instruction of use of cohesive devices, though Tangkiengsirisin believes that despite the cohesion is an effective linguistic factor which contributes to the well-connected writing, it may be enough as a device of measuring overall writing quality.

CONCLUSION AND SUGGESTION

According to the findings of the study, precious insights were provided for the importance of textual cohesion accessed by cohesive conjunctions in academic writing. Many ESL and EFL learners are not able to utilize grammatical cohesive devices (in this case, cohesive conjunction) in their written production

academically and properly sufficient to make a coherent and cohesive text. By clarifying the importance of conjunctions as cohesive devices, the study promoted awareness for teaching of cohesive conjunctions that could finally be utilized to English for academic aims courses. A systematic teaching of these cohesive devices could be designed by approaching the corpus-based analysis of cohesive conjunctions used in various frequencies.

In order to access a deeper insight of applying cohesive devices, it could be effective to perform to carry out similar analysis for other grammatical and also lexical cohesive devices. Also, it could be very effective to carry out a deeper textual analysis to survey the malfunction and well-functions; thus, its investigation is suggested for other researchers working in this point.

This study has confronted two constrains that require to be mentioned. This study did not survey the malfunction or well-function of conjunctions; thus, its inquiry is suggested for other researchers working in this point. One should remember that other factors affecting the cohesion of a text such as malfunction and well-function of conjunctions and therefore other grammatical devices and lexical cohesive devices were not surveyed as part of this research; and as it was noted in review of literature, recent study of Zoghi and Reshadi (2013) compared the frequency of the use of lexical ties in English Medical Sciences (EMSs) articles written by Iranian and native writers. A clear limitation of that study was the size of the corpus (only 20 articles). The current study concentrated on applying cohesive conjunctions in applied linguistic article written by native and non-native authors in a corpus of 348 articles. Researchers can multiply the current study concentrating on other grammatical devices and lexical cohesive devices. Just conjunctions were selected and analyzed in this study. Other researches are suggested in order to analyze other grammatical cohesive devices for achieving more comprehensible results. While some prior researches have surveyed, a cohesive speech cannot be carried out by applying just grammatical cohesive devices since it is obvious that applying lexical cohesion has a major role in writing. This feature is disregarded in this study, and it may be a good topic for future research.

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