

Conjunctive Ties in Conference Proceedings of EFL Persian Graduate Students

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ABSTRACT

This paper presents the findings of a research on academic writings of Persian scholars in English language with focus on conjunctive ties used in the proceedings of a conference. Basing on Systemic Functional Linguistics (Halliday 1994; Halliday & Matthiessen 2004) as theoretical framework, this study investigates conjunctive devices which are one of the main devices of cohesion making in academic writings. Frequency of occurrences of the three categories of conjunctions (Extension, Elaboration, and Enhancement) was investigated and comparisons were made between the two groups of Persian who are studying in Iranian and Malaysian universities at graduate levels. Although there were some variations in the distribution of conjunctives used by the two groups of Persians, they were not distinctively different regarding employment of conjunctive relations in their conference proceedings. In comparison with other ESL/EFL users of English, Persian scholars revealed similarities with small variations that could be traced which are mainly because of their mother tongue backgrounds.

Keywords: Conjunctions, conjunctive cohesion, systemic functional linguistics, academic writing, Persian.

INTRODUCTION

Writing acceptable academic texts in English language that meet expectations of international academic societies as

well as publishers' standards could be challenging for non-native English speakers. Forming cohesive scientific writings is more demanding because interference of mother tongue has serious effects on rhetorical selections of the writers (Trebits 2009; Liu & Braine 2005; Clachar 2003; Zhang, 2000). This is particularly related to the methods of teaching and learning foreign languages which mainly focus on sentence

ARTICLE INFO

Article history:

Received: 19 July 2012

Accepted: 31 July 2013

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building since EFL learners show serious problems in creating texts even though their sentences are correctly built (Zhang, 2000). Problems in connecting sentences and writing compositions (i.e., organizational problems) indicate inadequate cohesive devices that Halliday and Matthiessen (2004) believe are developed through conjunctions, references, substitution and ellipsis, and lexical cohesion in discourse. Among these four cohesion ties, conjunctive devices are the focus of this study, since Halliday (1994, p. 337) stresses that substitutions and ellipsis “are more characteristically found in dialogues”. Similarly, Schleppegrell (2004) also confirms priority of conjunctions and references in the structure of schooling language and scientific texts, while other cohesive elements are important in oral discourse. Hence, this research merely concentrates on conjunctive cohesion makers via evaluation of the frequency rates of explicit conjunctions of conference proceedings though the implicit conjunctions are not counted here.

SOME PREVIOUS RESEARCH ON CONJUNCTIONS

Explicit conjunctions, which act as a flexible device serving writers’ comments and ideas as well as readers’ interpretations (Gardezi & Nesi, 2009), have been under investigation especially after Halliday and Hasan’s (1976) influential work *Cohesion in English*. In general, the studies on conjunctions can be divided into two major groups with regard to their objectives; firstly, descriptive research that discuss the use of conjunctive ties in

different nations (namely, Bolton *et al.*, 2002; Gardezi & Nesi, 2009; Green *et al.*, 2000; Hinkel, 2001; Clachar, 2003; Bacha *et al.*, 1980). Some of them focus on a single conjunctive and its role in the performance of language learners such as Klerk’s (2005) research on the use of *actually* by English users of South Africa with Xhosa as their mother tongue, Ogoanah’s (2011) research in *as in* among Nigerian English speakers, and Bao and Wee’s (1998) investigation on the employment of *until* among Singaporean English users. Such studies mainly report variations in the use of conjunctions among the discourse of ESL/EFL learners from different nations. They try to relate the dissimilarities to aspects of the native languages or environmental issues, such as influence of culture or major studies of the subjects.

The other class of conjunctive research compared the level of writing proficiency with the frequency of the conjunctives, such as the works by Jafarpur (1991) and Vahid and Hayati (2011), who correlated writing quality and cohesive devices among Persians, or Liu and Braine (2005) and Zhang (2000) who did similar comparisons in Chinese universities. Here, a brief review of the most related research to the present study that firstly described the conjunctive markers found in academic writings of Persian scholars is presented. Then, some comparisons are made between two groups of Persians to examine the influence of foreign academic environment on the use of conjunctive cohesion of academic writings, particularly that of conference proceedings.

In a research on cohesion markers of academic writings, Hinkel (2001) compared cohesive devices produced in texts by students with five different mother tongues (English, Korean, Japanese, Indonesian, and Arabic). By cohesive ties, Hinkel (2001) means phrase-level coordinators, sentence transition, logical semantic conjunctions, demonstrative pronouns, and enumeratives, as well as resultative nouns. Among these cohesive ties, only coordinating phrase conjunctions and logical-semantic conjunctions are related to the present study. His findings show relative similarity in the usage of logical-semantic conjunctions among students of the corpus, while phrase conjunctions have been overused by Arabs but underused by Indonesians. Hinkel (2001, p. 129) mentions Arab students employed coordinating conjunctions in repetitions as well as parallel structures of noun and verb phrases; however, Indonesians used them for “detailed information and elaboration of ideas”.

Bolton *et al.* (2002) investigated 20 essays from students of the University of Hong Kong for connectors. Moreover, they made comparisons between their findings and two other sets of data: a list of British connectors from the International Corpus of English (ICE-GB) as well as another list of connectors that was extracted from published academic writings. Analysis of the list of connectors showed that 19 connectors of the list of published academic writings have never been used by British or Hong Kong students. The study sees overuse of other connectors to compensate

although the overuse among the Hong Kong students (+11.8) is twice as much as the British students (+6.7). Generally, Bolton *et al.* (2002) concludes that the overuse of connectors by the students in their academic writings happens with native English speaker students, as well as non-natives, since the range of the connectors used is much more limited compared to the academic writings by professionals. The authors think the overuse of connectors by students is the result of their limited ability to connect the ideas properly through lexicalization.

Gardezi and Nesi (2009) researched conjunctive relations among academic writings of British and Pakistani students. Their study hypothesized massive overuse of conjunctive ties in academic texts by Pakistani students because of their limited competence in logical relationships as well as their mother tongue interference. Conjunctive ties of this study followed Halliday and Hasan’s (1976) four categories of conjunctive relations (Adversative, Causal, Additive, Temporal). Quite unexpectedly in the Pakistani sub-corpus, Causals, Additives, and Adversatives showed very similar frequencies of use, followed by Temporals. In the British sub-corpus, however, Adversatives were the most popular, followed by Causals, Additives and Temporals. Although the Pakistani participants in Gardezi and Nesi’s (2009) study knew English as their first language, their selection and usage of conjunctive elements were dissimilar to the British students of the same discipline.

Therefore, the researchers concluded that the use of conjunctive elements is influenced by the discourse of the local academic environment as well as cultural backgrounds because the main objective of the undergraduate writers is to adjust their academic writings to the expectations of their local discourse communities. The researchers related the preference of causal and adversative conjunctives and the neglect of temporal conjunctives to the level of sophistication in university assignments and the features of argumentative texts (the task) that mainly involves facts, views, and opposing ideas. Some features of this research will be discussed later in the discussion part of the present study.

Although Trebits's (2009) research is not on academic language, it is reviewed here since she also confirmed major dissimilarities in the conjunctions used in the European Union (EU) documents and British National Corpus (BNC). Believing that cohesion is a matter of "grammatical dependencies", Trebits (2009) studied a corpus of EU documents in English language (from all subjects: economy, education, law, business, etc.) for conjunctive cohesion in order to describe the EU documents and to arrive at some pedagogical implications. She defined seven categories in her study; Additives, Adversatives, Causals, Temporals, Continuatives, Hypotheticals, and Clarifyings to evaluate both conjunctions and linking sentence adverbials as conjunctive cohesion elements. To begin with, she found the most frequent conjunctions in EU documents to be 94,

which occur 12,197 times in the 200,000 words corpus. The results of her analysis with BNC proved major differences in both the order and categories of the occurred conjunctions.

AIMS OF THE STUDY

As mentioned in the literature review section, research on conjunctive devices either describe the frequency and type of conjunctives of EFL/ESL learners, then compare them with native English speakers, or relate the frequency of conjunctive ties in the writings with the quality of the compositions. This study combines the objectives of previous research on the study of conjunctions. It firstly describes and then compares conjunctive ties of the academic writings of Persian scholars. In the first phase, it describes the general frequency and arrangement of categories of conjunctive ties used in the papers. After that, it compares two groups of texts written by Persian writers from Iranian and Malaysian universities to examine the influence of studying abroad (in Malaysia) on the conjunctive cohesion of the texts written by Persian students of Malaysian universities. Therefore, the present study seeks to find answers to the following research questions:

1. What are the general frequencies of conjunctive ties employed in conference proceedings of Persian participants?
2. What are the frequencies of the categories of conjunctions (Extensions, Elaboration, and Enhancement) based

on Hallidayan Systemic Functional Linguistics?

3. Is there any dissimilarity between Persian students of Malaysian and Iranian universities regarding the use of conjunctive devices?

METHOD

Theoretical Framework

This study is based on Systemic Functional Linguistics (SFL) of Halliday (1994) and Halliday and Matthiessen (2004), which describes and interprets sense-making and strategic views of language. Generally, SFL aims to show the potential meaning that a speaker could convey through semantic networks and to indicate the wording and its meaning through lexicogrammar. Halliday (1994) believes users of any language intentionally select their intended meaning in order to reach their communicative aims, so it is important to investigate how individuals make meanings or communicate by the help of language in their social activities. In other words, a series of choices by language users constitute text and consequently, the choices in every text show the special configurations of that particular situation or situational context (e.g. a friendly chat, an academic discourse). Situational context that surrounds acts of verbal behaviour is the focus of studies of registers as well as academic languages, and is presented through three levels of language: field of discourse, tenor of discourse, and mode of discourse that refer to ideational, interpersonal, and textual meaning, respectively.

According to systemic functional views, textual meaning (or Mode of discourse) is the symbolic organization of language which refers to what it is that the participants are expecting the language to do for them in the situation or the function of the text in the context, alongside its symbolic organization (Halliday & Matthiessen, 2004). Textual analysis (or Mode of discourse) depends on investigation of lexicogrammatical choices in order to find thematic and cohesion structures of the texts. In SFL approach, cohesion in texts is achieved through conjunctions, references, ellipsis and substitutions, as well as lexical cohesion. Halliday and Matthiessen (2004) define three categories for conjunctions; which are Elaboration (e.g. *actually, for instance*), Extension (e.g. *and, also*), and Enhancement (e.g. *then, if*). Based on SFL, the present study focuses on conjunctive cohesion of academic texts written by Persian authors who have attended a conference in Malaysia.

Participants

The participants of this study were Persian scholars who presented their experimental proceedings at a conference on Nanotechnology held by Universiti Kebangsaan Malaysia. There were twenty-seven proceedings written by Persians though only twenty-three of them were used as the data of this study. Eleven of these twenty-three proceedings were sent to the conference by the participants from Iranian universities, while twelve other proceedings were written by Persian postgraduate students who were studying

in two of the best universities of Malaysia [National University of Malaysia (UKM) and Universiti Putra Malaysia (UPM)]. Therefore, the selected Persian scholars of this study were divided into two groups; the ones who are graduate students in Malaysia with English language as the medium of instruction, and those who are studying in Iranian universities and attended the conference from Iran. Like most studies on academic language, age factor is not controlled among the participants, though all of them have Persian nationality and studied according to Iran's educational system until their undergraduate degrees.

Data

The data of this study, which are formed by the conference proceedings of Persian scholars were not written within a limited time since the scholars had made their papers ready over a period of days or even weeks with ample time to check for any possible linguistic mistakes or errors. All of them presented experimental procedures which were done by the authors and reported in the proceedings with within a word range of 308 to 1792 words. It seems that Persian scholars in Iranian universities had written longer proceedings compared to their peers in Malaysian universities. The proceedings differed in terms of the number of words even within the same group, though the group from Iran had written relatively longer proceedings. While the group from Iran had eleven proceedings in the conference, their total number of words (10229) is slightly higher than the total number of words in

the group from the twelve proceedings of Persians in Malaysian universities (9129). The mean for the number of words also shows this difference between the two groups, i.e. 930 words and 760 words for Iranian and Malaysian universities, respectively.

Procedure

Since many transition words can appear both as prepositions and conjunctions, the conjunctions were counted manually to make sure about their relative/ conjunctive function in the texts. In other words, conjunctive ties in the present study were counted manually because this study is interested in conjunctions that are merely linking clauses, sentences, and paragraphs. According to SFL, these links form the theoretical framework of this study, and conjunctions used in parallel structures or complex verbs are not really related to the cohesion of the texts. Therefore, using software did not lead to more precise and ordered finding as software cannot decide about the function of conjunctive devices and they simply report on the frequencies. For this reason, this study was designed to obtain a relatively small corpus to enable the manual handling and management of the data.

Of particular methodological interest here is the great variation in the method of calculating the frequency of the conjunctions, specifically *and*. Most of the available research in the literature on conjunctions adopts a ratio of occurrence regardless of the functional connection that is made by each

conjunction. Such a method fundamentally contradicts with the aims of this study since most *ands* appear in parallel structures (e.g., *make it reusable and compatible*) rather than connecting clauses. Such structures have nothing to do with the cohesion of the text. Although the number of conjunctions used in the papers of this study is quite high (mostly *and*), only the conjunctions that are related to the cohesion of the papers (connecting two clauses or sentences) were counted. The conjunctions that have been used in parallel structures are not included in the conjunction frequency rates because Hallidayan Systemic Functional Linguistics defines conjunctive cohesion in the context of connecting the clauses (Eggins, 2004; Halliday & Matthiessen, 2004).

Therefore, the numbers of conjunctions in this study are not comparable with other corpus-based analyses done through the use of software since the results of such research are not sensitive to the function of conjunctive elements in the texts. Corpus-based studies mostly include the conjunctives found in parallel structures in the total number of conjunctions which inflate the data in the final results. Only Gardezi and Nesi (2009) who have counted the intersentential conjunctions have found relatively similar findings that will be discussed later.

Then, the final conjunctive ties are presented according to the classification of Systemic Functional Linguistics. Finally, the frequency of each conjunction was recorded in an excel file for it to be clearly distinguished in the three categories that

Halliday and Matthiessen (2004) define for conjunctions: Elaboration, Extension, and Enhancement.

RESULTS AND DISCUSSION

Sixty-two different conjunctions were used in the data gathered 376 times for this study. All three classifications of conjunctions according to Hallidayan Systemic Functional Linguistics existed in these found conjunctions though their distributions were not equal among the three types. While thirty-nine conjunctions belonged to the enhancement class, there were nineteen extension conjunctives and only four elaboration conjunctives. However, the nineteen extension conjunctive elements in the data formed half of the total conjunctions (50%). The enhancement category was the most varied, including thirty-nine different conjunctive ties, and they constituted 48.6% of the clausal and sentential linkers, leaving 1.3% of the total conjunctives in the elaboration category. These results are presented in the table 1.

Extension conjunctions that are used more than the other groups generally could have two purposes; they could be produced for addition of information (*and, also, but*) or variation of information (*on the other hand, on the contrary*). It seems that Persians are used to using these kinds of conjunctions, mostly for addition, since variation conjunctions were used only in seven cases, leaving 181 out of 188 cases for addition type conjunctions (Table 2)

(Thence, tables on the individual class of conjunctives are reported as a percentage of the total number of conjunctives found. Examples shown are those obtained from the data).

Enhancement conjunctives were classified into four main categories by Halliday (1994); temporal (time and sequences), spatial (place), manner (means and comparison), and causal-conditional (referring to causes and conditions). Persian writers of this study used causal-conditional

conjunctives (23.2%) more than the other types – Temporals (14.1%), Manner (8.53%) and Spatial conjunctives (2.4%). Detailed findings are presented in Table 3.

The frequency of the elaboration conjunctives is very low (5 occurrences, 1.3%); hence, their precise sub-classifications according to Halliday and Matthiessen (2004) is presented in Table 4.

All eleven proceedings by the Persian students/researchers from Iran universities contained both Extension and Enhancement

TABLE 1
Distribution of conjunctives based on SFL

CONJUNCTIONS	Frequency	No. of types	Percentage
Elaboration	5	4	1.3%
Extension	188	19	50%
Enhancement	183	39	48.6%
Total	376	62	100%

TABLE 2
Distribution of Extension conjunctives

Extension Conj.	Sub-types	Frequency/Percentage	Examples
Addition	Positive	146/ 39.2%	<i>and, also, moreover</i>
	Negative	1/ 0.26%	<i>Nor</i>
	Adversative	34/ 9.06%	<i>but, on the other hand</i>
Variation	Replacive	7/ 1.86%	<i>on the contrary</i>
	Subtractive	0	-
	Alternative	0	-
Total		188/ 50%	

TABLE 3
Distribution of Enhancement conjunctives

Enhancement Conj.	Frequency/Percentage	Example
Causal-conditional	89/23.2%	<i>then, if, ...</i>
Temporal	53/14.1%	<i>after, when, ...</i>
Manner	32/8.53%	<i>as, so, thus, ...</i>
Spatial	9/2.4%	<i>where</i>
Total	183/48.6%	

types of conjunctive ties, while Elaboration type (the least frequent) appeared in only two of them (Table 5). Similarly, Extension types appeared in all proceedings of the other group (Persians from Malaysian universities), except for Enhancement that was not used in one paper and Elaboration that was seen in only one proceeding out of twelve (Table 6). Apparently, there is no marked difference regarding the quantity of conjunctive ties between the two groups (Tables 5 and 6).

Comparison of the Two Groups of Persians

Leaving the general description of the data aside, the second objective of this study

was to look for differences between the two groups of Persian scholars; the ones who were doing graduate degrees in Iranian universities and the ones who were studying in Malaysian universities in graduate levels. Differences in the distribution of the conjunctive ties between the two groups of Persians were calculated using the online Rayson’s Log-likelihood Calculator (Rayson, n.d.). This study used the Log-likelihood Calculator because simply measuring the frequencies of the linguistic items is not very valid when the sizes of two sets of data are different. This website has been designed for corpora comparison when two sets of data do not have the same quantity regarding the number of words.

TABLE 4
Distribution of Elaboration conjunctions

Elaboration Conj.	Frequency/Percentage	Examples
Apposition	4/ 1.06%	<i>e.g., for instance,</i>
Clarification	1/ 0.26%	<i>actually</i>
Total	5/ 1.3%	

TABLE 5
Findings of the Persians from Iran’s universities

Proceeding no.	Elaboration	Extension	Enhancement	Total
1	0	5	4	9
2	1	2	3	6
3	3	8	14	25
4	0	5	5	10
5	0	5	1	6
6	0	19	9	28
7	0	7	7	14
8	0	7	7	14
9	0	17	11	28
10	0	12	11	23
11	0	16	4	20
Total	4	103	76	183

TABLE 6
Findings from Persians in Malaysian universities

Proceeding no.	Elaboration	Extension	Enhancement	Total
1	0	7	6	13
2	0	5	15	20
3	0	1	5	6
4	0	1	5	6
5	1	6	7	14
6	0	16	11	27
7	0	4	10	14
8	0	9	8	17
9	0	14	13	27
10	0	3	0	3
11	0	4	5	9
12	0	15	21	36
Total	1	85	106	192

Log-likelihood Calculator uses Dunning's G^2 ratio as a statistical measure to compare the frequencies of a linguistic feature against the total number of words in two different-sized corpora. The higher the G^2 ratio, the more considerable the difference is between the two frequency scores. Rayson interprets G^2 value as significant and meaningful when it is 3.8 or higher at the level of $p < 0.05$ and 6.6 at the level of $p < 0.01$. In the following tables (Tables 7 and 8), relative frequencies calculated indicated occurrence of the linguistic feature per 100 words.

Table 7 shows that the frequencies of Elaboration and Extension types of conjunctive elements are similar in both sets of data, but there is a significant difference in the use of Enhancement conjunctions between the two groups. Persian writers of both Iranian and Malaysian universities employed Extension and Elaboration types of conjunctions similarly in this study, which

is apparent from the low G^2 value of these two classes, whereas Enhancement type is more preferred among the Persian students who are studying in Malaysian universities (G^2 value = 8.97). The G^2 value of the total use of conjunctive elements between the two groups was 2.45, which was lower than the level of significance (3.8) based on Rayson's Log-likelihood Calculator.

The Most Frequent Conjunctions

The most frequently used conjunctive elements and their comparative frequency in the two sets of data are listed in Table 8 (below), in which + is a sign of overuse by the Persians of Malaysian universities in relation to Persians of Iranian universities, whereas – refers to underuse by Persians of Malaysian universities compared to Persians of Iranian universities. A comparison of the occurrence of the most frequent conjunctive ties of Persian writing in this

TABLE 7
Relative frequency and log-likelihood scores

Conjunctions	Iran (10229)	Relative frequency	Malaysia (9129)	Relative frequency	G ² value
Elaboration	4	0.04	1	0.01+	1.60
Extension	103	1.01	85	0.93+	0.29
Enhancement	76	0.74	106	1.16-	8.97
Total	183	1.79	192	2.10-	2.45

TABLE 8
The most frequently identified conjunctive ties

No.	Conjunctive ties	Iran (10229)	Relative frequency	Malaysia (9129)	Relative frequency	Total	G ² Value
1	<i>and</i>	43	0.42	41	0.45-	84	0.09
2	<i>also</i>	24	0.23	8	0.09+	32	6.66
3	<i>then</i>	8	0.08	14	0.15-	22	2.41
4	<i>however</i>	8	0.08	13	0.14-	21	1.84
4	<i>as</i>	10	0.10	11	0.12-	21	0.23
5	<i>after</i>	8	0.08	11	0.12-	19	0.88
6	<i>therefore</i>	8	0.08	4	0.04+	12	0.94
7	<i>While</i>	8	0.08	3	0.03+	11	1.83
8	<i>Thus</i>	6	0.06	4	0.04+	10	0.21
8	<i>But</i>	4	0.04	6	0.07-	10	0.66
8	<i>When</i>	5	0.05	5	0.05-	10	0.03

study with students from the Hong Kong University (Bolton *et al.*, 2002) revealed a 60% similarity, while there was only a 41% similarity between the findings in present study with that of the British students. In the same way, half of the most frequent conjunctive elements in Gardezi and Nesi's (2009) findings did not appear as the most frequent conjunctives used in the present study. The results were also very different when compared with the most frequent conjunctions of academic writings written in English by Chinese students reported by Green *et al.* (2000).

However, in line with some other studies (see Mohamed-Sayidina, 2010; Zhang,

2000), additive conjunctions hit the first position and half of the other conjunctive ties also listed as the most frequent ones (*and*, *also*, *however*, *while*, and *but*. The ties belong to the addition class of Extension (Halliday & Matthiessen, 2004). Other conjunctives (*then*, *as*, *after*, *therefore*, *thus*, and *when*) fall under the Enhancement category. Elaboration conjunctives did not make it to the most frequent list.

According to Halliday (1994), the conjunctive elements play two crucial roles regarding their functional relationship, which combined with expansion increase cohesion between clause complexes (*also*, *however*, *therefore*). They could

also emphasize interdependency between clauses in a clause complex (*and, but, then, while, when, after, as*). *Thus* can appear in both functions, as it could make a text more cohesive when placed in the initial position of the sentence, but it is more interdependent when used within a sentence. Since the G^2 value of most conjunctive elements in the most frequent list in this study (except *also*) is less than 3.8, it can be concluded that the Persians of both groups have employed the conjunctive ties in a similar fashion. So, studying in Malaysian universities has not changed the Persian writers' use of conjunctive cohesion.

ALSO, the Exception

Ten conjunctives that were most frequently used in this study were employed in a relatively similar way in the two groups. However, there is one exception. *Also*, which stands in the second position of the most frequent conjunctive ties, is the only conjunctive element that was used in a very distinctive manner in the two groups, with a G^2 Value of 6.66. Apparently, the Persian students of Iranian universities employed *also* much more fluently and frequently in their writings. It could be assumed that Persians of Malaysian universities did not employ *also* as extensively because they

used other more suitable connectors. The overuse of *also* by Persians supports the findings of Bolton *et al.* (2002), whereby the students of Hong Kong University had also overused *also* quite similarly (relative frequency = 0.43). The Persian students from Malaysian universities used conjunctives in more similar way when compared with native English speakers' academic writing. This comparison is shown in the following table (Table 9).

AND, the Dubious One

Although *and* is the most frequently used conjunction in both groups of this study, its frequency is not comparable with most other studies (see Hinkel 2001; Terbits 2009; Bolton *et al.*, 2002) because of some methodological differences. As it has been explained earlier, *and* in this study is counted only when it is used to connect clauses or sentences, while other research included all *ands* regardless of the functional positions in the text, resulting in the frequency of *and* in those studies to be very high. Gardezi and Nesi (2009) also calculated the frequency of *and*, but only in the initial position of the sentences in their data, leaving out the ones occurring between the clauses. Consequently, the frequency of *and* in their research is much lower than

TABLE 9
Comparison of the findings of also

Academic writings of	This study			Bolton <i>et al.</i> (2002)	
	Iran universities	Malaysian universities	Hong Kong University	UK's native students	Native professionals
<i>ALSO</i>	2.3	0.9	1.56	0.28	0.02

The relative frequency figures of this table indicate occurrences per 100 words.

other research. Even though there are some differences in the method used in the present study and that of Gardezi and Nesi's (2009), the two studies can be compared in the use of reg *and*. As mentioned earlier, the British participants of the research by Gardezi and Nesi (2009) did not use intersentential *and* in their assignments at all, thus, the relative frequency of the intersentential *and* in the Pakistani sub-corpus of their study was 0.32 (per 100 words). The relative frequency of *and* in academic writings of Persian scholars was 0.43 per 100 words, which is not very different from the Pakistani in view of the fact that this frequency is not limited to intersentential usage and includes the case of connecting clauses as well.

Complexes with AND

One interesting point in the results of the present study is the excessive use of *and* + another conjunctive tie as in *and also*, *and thus*, *and then*. Although such linguistic features also occurred in other studies, it seemed that Persians were inclined to its use (overall 14 cases, 3.7%) compared to the other nationalities. In addition, Persian scholars had utilized some complex combinations by adding *and* to another conjunctive element like *and therefore* and *and still* which are not in style of academic texts. In such cases, the added conjunction could be perfectly meaningful without the addition of *and*. It seems that Persians are more used to wanting to confirm the sequence of events or it could be that they added *and* because of L1 interference. The frequency of such complexes in texts

produced by Persians is higher compared to other studies (see Hinkel, 2001; Gardezi & Nesi, 2009). The use of some of them (*and therefore* and *and still*) have not been reported in any other research.

Temporal Conjunctions

In the table reporting the most frequent conjunctive ties (Table 8), there are five elements referring the timing of actions (*then*, *as*, *after*, *while*, *when*) that Halliday and Hasan (1976) call Temporal conjunctions. This finding emphasizes on the nature and objective of the academic texts that need to observe the sequence of events in describing for instance, test processes, method, procedures, as well as experiment clarifications. The Temporal conjunctions play a major role in academic texts, and their frequent use found in the present analysis is reasonable and consistent with Trebits' (2009) findings, in which Temporals ranked the second most frequent after additives. The use of Temporals in academic writings of two groups of Persians of the present research is very similar (G^2 value < 3.8).

CONCLUSION

This paper aimed to describe the use of conjunctive cohesion of academic writings of Persian scholars through exploration of the frequency of conjunctive ties in conference proceedings written by Persian scholars in Iran and in Malaysia. A comparison of the use of different conjunctive elements used by the Persians was made based on Hallidayan Systemic Functional Linguistics (Halliday, 1994; Halliday & Matthiessen,

2004). The conjunctive ties found in this analysis were categorized into three types; Extension, Elaboration, and Enhancement, while the similarities and differences were highlighted. The findings of this research emphasize the importance of textual cohesion created by the use of conjunctive elements in academic writings.

However, there is no significant difference regarding the usage of conjunctions (conjunctive cohesion) between Persian students who are studying in Malaysia and their peers who are studying in Iran. Persian students of Malaysia employed more logical relations in their academic writings since 1.78 % of the total number of words written by Persians from Iran universities were formed by conjunctives, while the figure is 2.10 % for the texts by Persian students of Malaysian universities. The G^2 value of 2.45 indicated that the frequency of use of conjunctive ties of the Persian students of Iranian and Malaysian universities is not significant ratio ($LL < 3.8$). Therefore, it could be said that studying in Malaysia at the graduate level within an environment where English is emphasised did not increase the use of conjunctive cohesion of the academic writings of Persian students. It could be deduced that leaving the native country after the first degree and starting graduate studies at an environment where English is the second language does not positively influence writing insofar as conjunctive cohesion of academic writing of EFL learners is concerned. Although the frequency of the conjunctive ties was not exactly equal

in the two groups, the difference in their occurrences was not considerable according to inferential statistics. The data of this study are limited to only conference proceedings. Researching other aspects of cohesion, such as referential and lexical cohesion will enhance the description of cohesion in the academic writing of Persians. The findings can also contribute to the teaching and learning of English for academic purposes.

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