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Comparison and analysis of logical connectives usage by english learners from the perspective of quantitative

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ABSTRACT

How to use logical connectives rightly has always been the key point of English study and exploration in the process of English learning. In this study, the author establishes a logical connective corpus, and compares and analyzes Outlines of the differences between Chinese English learners and native English speakers based on the corpus's data. Therefore, more clear reflection of Chinese English learners in learning and using logical connectives can be made and finally provides effective solution for the Chinese learners to learn English better. As learning based on corpus is effective, it shows information of logical connectives usage by the real English-speaking learners and helps the Chinese learners to understand the real English language environment. What's more, Chinese students can learn to use corpus resources and deal with the difficulties encountered in the study through self-searching and comparison, achieving the purpose of the proper using of logical connectives.

KEYWORDS

Perspective of quantitative; Logical connective; Contrast; Corpus.



INTRODUCTION

The logical connectives can be divided into different kinds in both English and Chinese. In order to facilitate the research, the author build a small corpus of English writing of Chinese English learners as a comparison. By comparing the analysis we can see that Chinese English learners use logical connectives more often than native English speakers in writing, especially in the usage of some common logical connectives. In addition, through further study we can find that Chinese English learners are used to put logical connectives at the beginning of the sentence or use them wrongly, which more or less has connection with Chinese English teaching materials and teaching methods. So the author thinks that a good English corpus can really make us understand the usage of logical connectives in real context. Thus it can be conducive to the standardization of the English teaching and improve the quality of Chinese English learning.

It is important to use the logical connectives rightly since that the main relationship among sentences is achieved through the logical connectives. If logical connectives are used properly, the whole writing would be logical and reasonable, otherwise, there would be ambiguity and fault. Therefore, comparison and analysis of usage of logical connectives through the real English teaching practice has become a focus in the study of English teaching. Previously, we used the wrong research method to study the usage of logical connective. Specifically speaking, researchers just recorded errors and then did contrast analysis of them according to the grammar so as to get the right one. As for other research methods, there are a certain similarity with the former one. They has certain but not fundamental effect on improving English learners' writing ability. There is another reason that can lead to this phenomenon. Because there is limitation of itself as a native Chinese speaker and the narrow surrounding environment of learning a foreign language, simple error analysis alone could not solve the fundamental problem. There is a problem from the research method as in the process of research, researchers can only get the limited scope of the wrong usage, which belongs to the small probability event. It could not fully reflect the errors in the English learning problems and the results failed to have accurate reference for English teaching.

Recently, the research of teaching has become digital and has a certain universality and representation under the perspective of quantitative. During the process of English learning, Chinese learners can research for the usage of logical connectives and collect the relevant data in the corpus through the search software to establish their research on the basis of the data model. Obviously the obtained results could provide significant guidance that are necessary for practical English writing teaching. With the development of the study of logical connective usage in abroad, we may discuss and compare between the Chinese learners and English learners in the process of their study from the different aspects of semantics, syntax, and genre. It is concluded that the reason why there are differences is that Chinese English learners don't understand the right semantic function in the different style of articles and use them in stereotypes.

THE RESEARCH METHOD

The research method of this study is to analysis from the perspective of quantitative. The author builds a small corpus for students writing as reference corpus in the course of modeling of quantitative perspective. At the same time, 20 common logical connectives are selected as the research objects. MonoConc. Pro 2.0 is adopted in the search of corpus and summarize, analyze and compare related word retrieval, as well as the results and position and function in the sentence. In this study the following two aspects are determined to be answered:

- (1) Are there any differences among Chinese English learners on the usage of the twenty common logical connectives compared with native English-speaker learners? If so, in what aspects?
- (2) Are there any differences among the sentences position of the twenty logical connectives used by Chinese learners and the native speakers? If so, in what aspects?

Selecting the logical connectives

The logical connectives can be divided into different kinds in both English language and Chinese language. Different researchers have different understandings of classification of the logical connectives function. In this study, we call all the words that play a role of connection as logical connectives. Logical connectives can be used to express different semantic relationships in the use of language, especially in the using of language and writing. Logical connectives are used to realize the function of the logical relationship, so it is particularly important. In this study, we selected the logical connectives which are frequently used in daily life and this is the most important part of the whole research process. First of all, the author observed that all the researches both in domestic and abroad are about these words that are used most commonly. Therefore, these words would be our best choice. The author compared and selected the following twenty logical connectives on the basis of her own teaching experience as the objects of study and analysis. there are: hence, yet, because, fit, although, therefore, however, so, in fact, On the other hand, for example, indeed, thus, moreover, also, furthermore, braking, but, thus, then.

The establishment of the corpus

In numerous corpus, Chinese learner corpus built by Shichun Gui and Huizhong Yang and Chinese students English translation corpus built by Qiufang Wen and others are to some extent help researchers to find the common problems existed in Chinese English learners. However, when we need to study a particular problem, or problems in different groups, the limitations of the corpus are shown, so the author established a small corpus according to their own research needs. Among

many English learners in China, the number of non-English major learners is really big, therefore, their problems in English learning represent the common problems of the whole group for Chinese English learners. In order to achieve more accurate understanding of situations of non-English major college students using logical connectives, the author formed an English composition writing corpus contained these writings from college freshmen and graduates.

In order to further reflect the objectivity of the research, the author subdivides the corpus into undergraduate writing corpus and graduate corpus. Undergraduate writing corpus is composed of 227 undergraduate English essays, words amount to 37934; Graduate student corpus is composed of 266 postgraduate English composition writings, words amount to 54130. Therefore, the amount of words in the corpus is 92064. The author thinks that native English thesis corpus is more conform to the needs of the research compared with other corpus. The corpus, including a lot of compositions written by British students and American students, has 93546 words. the compositions of British students words amount to 45624 while American students compositions words are 47922.

THE RESEARCH RESULTS AND ANALYSIS

We will compare and analyze the frequency of logical connectives in this section, and then further discuss the position of logical connectives in the statement.

The usage of the twenty logical connectives

By comparing the relevant data from two corpora, the author find that Chinese learners use the logical connectives more often than the native English speakers. In the two corpora, Chinese learners use logical connectives for 2376 times while the number for native English speakers is 1532. From this data, we can see that although the total vocabulary of two corpora is similar, the usage of logical connectives is different. The different ratio reaches 1.55. TABLE 1 reflect this phenomenon intuitively.

TABLE 1: The frequency and ratio of the twenty common logical connectives in the two corpora

number	LOCNESS			number	LCEW		
	connectives	frequency	Ratio (%)		connectives	frequency	Ratio (%)
1	because	356	22.88	1	so	604	25.19
2	but	328	21.08	2	but	582	24.27
3	also	192	12.34	3	also	326	13.59
4	so	176	11.31	4	because	249	10.38
5	then	118	7.58	5	however	152	6.34
6	however	94	6.04	6	then	100	4.17
7	therefore	46	2.96	7	on the other hand	56	2.34
8	yet	41	2.63	8	for example	54	2.25
9	instead	41	2.63	9	besides	53	2.21
10	though	36	2.31	10	in addition	50	2.09
11	for example	27	1.74	11	though	47	1.96
12	in fact	21	1.35	12	therefore	41	1.71
13	thus	21	1.35	13	thus	20	0.83
14	indeed	16	1.03	14	in fact	19	0.79
15	on the other hand	13	0.84	15	moreover	17	0.71
16	besides	10	0.64	16	yet	13	0.54
17	in addition	9	0.58	17	indeed	5	0.21
18	furthermore	7	0.45	18	instead	5	0.21
19	hence	3	0.19	19	furthermore	3	0.13
20	moreover	1	0.06	20	hence	2	0.08

The usage of the six most frequent logical connectives

From the TABLE 1, we can find the six most frequent logical connectives. They are the same, just be a little different in the order. The word "because" has the highest frequency in the native English thesis corpus while in learners' writing it only ranked fourth in the corpus. Therefore, its proportion of the Chinese learners is as less than half as the native speakers. Another obvious feature is that the word "so" has been used most frequently in the learners' writing corpus, up to 604 times, accounting for a quarter in the twenty logical connectives in total while in native English thesis corpus, "so" has

the frequency as 176 times, only accounting for one over ten in all common logical connectives total number. It fully shows that the Chinese English learners depend more on the word “so” and reflects they are lack of some ability in terms of logical connectives choice.

The comparison of differences in the frequency of logical connectives

The most significant difference on logical connectives frequency is the use of logical phrases. The four logical connectives rank in the frequency of 7, 8, 10, 14 respectively in the learner corpus while rank in the frequency of 11, 12, 15, 17, respectively in native English thesis corpus. We can find that Chinese English learners have their own preferences of the logical connectives by comparison with this data. Figure 1 shows frequency of the two groups of corpus in the condition of the logical connectives.

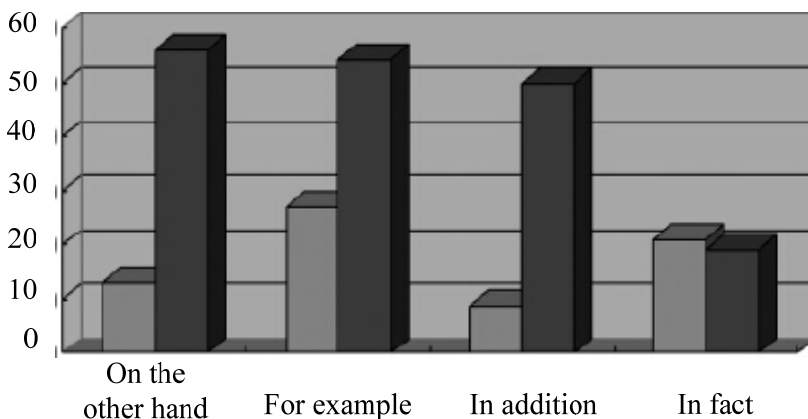


Figure 1 : The comparison of connectives frequency

From TABLE 1 we can also see that Chinese English learners cannot use some certain logical connectives rightly. For example, “yet” and “instead” are used for 41 times respectively in native English thesis corpus, ranked the eighth and ninth respectively in the twenty logical connectives while they are used for only 13 times and 5 times in the learner corpus, ranked as no. 16 and 18 respectively.

The comparative analysis of position of logical connectives

Based on the comparative analysis of the frequency of logical connectives, we will study the connectives position in the sentences and it is helpful for learners to understand the difference between them and native English speakers. TABLE 2 shows the ten logical connectives position in the two corpora for us.

In TABLE 2, we can see that logical connectives are more often used at the beginning of a sentence in the learner corpus. Chinese English learners used logical connectives in this way for 996 times, accounted for forty percent of the total number in the corpus while the native speakers used like this for 266 times, only seventeen percent of the entire corpus. This fully indicates that Chinese learners love using logical connectives at the beginning of a sentence.

During the following analysis, the author will focus on analysis of the adverb “however” and the subordinating conjunction “because”. so it is necessary to show their position in the sentence. Figure 2 shows the position of “however” and “because” in sentences.

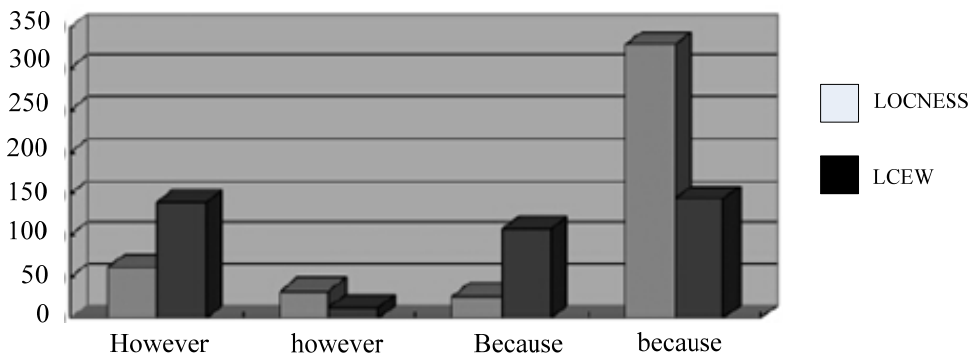


Figure 2 : The position of “however” and “because” in sentences.

TABLE 2 : The comparison of the logical connectives located at the beginning, the middle or the end of the sentence

number	LOCNESS		LCEW	
	At the beginning	Frequency	At the beginning	Frequency
1	However	61	but	253
2	But	49	So	244
3	Because	27	However	139
4	So	25	Because	107
5	Yet	22	On the other hand	46
6	Therefore	21	In addition	46
7	For example	21	For example	45
8	Instead	18	Besides	45
9	In fact	11	Also	38
10	Then	11	Then	33
11	Because	329	So	360
12	but	279	But	329
13	Also	186	Also	288
14	So	151	Because	142
15	Then	107	Then	67
16	However	33	Though	32
17	though	32	However	13
18	therefore	25	Thus	11
19	Instead	23	Therefore	10
20	Yet	19	On the other hand	10

The comparison of the location of “however”

In the process of comparing two corpus data, we can see the following characteristics. In learner writing corpus “however” appeared at the beginning of sentences for 130 times, as much as twice in the native English thesis corpus while it appeared at the middle of sentences only for half of the times that used in the native English thesis corpus. It shows that the Chinese English learners are used to use “however” at the beginning to express twist of meaning.

The logical connectives “so” and “but” are another examples of obvious location difference in sentences. They are more often used at the beginning of sentences in the learner writing corpus than in native English thesis corpus, which shows that Chinese English learners might think where there are more logical connectives, there is more logic relation of sentence.

Comparison of the position of “because”

From Figure 3 we can see very intuitively that “because” appeared at the middle of sentences for 329 times in native English thesis corpus while it appeared at the beginning for only 27 times. Through further analysis, we can see that there are 13 times of them are from phrase of “because of ” while the other 14 cases is from the adverbial clause. In 329 cases of “because” in the middle of sentences, we find that there are 53 cases from phrase “because of” while the remaining 276 cases are adverbial clauses. Different from the native English thesis corpus, “because” appeared at the beginning of sentences for 107 times in learners corpus, four times the size of that in the native English thesis corpus. However, it appeared in the middle of sentences for less than half of that in the native English thesis corpus. This contrast shows that very few English-speaking learners will put adverbial clauses in front of the main clause of complex sentences while the Chinese English learners might use logical connectives too much or improperly.

INSPIRATION IN THE TEACHING

Through the analysis of these 20 common logical connectives, we have more in-depth understanding on the Chinese English learners using logical connectives. Compared with native English learners, Chinese English learners are more dependent on fixed phrases and used to use logical connectives in the process of using language or learning. The reasons for this phenomenon are various. On the one hand, we emphasize the logical connectives among English teaching, making learners mistakenly exaggerate the role of logical connectives and leading to misuse and abuse. On the other hand, Chinese teaching materials provide unclear methods to use logical connectives by simple classification, which makes learners ignored the rhetoric of logical connectives, grammatical functions and highlight the significance of the logic function. This kind of one-sided understanding of logical connective knowledge not only cannot help Chinese learners to learn English better, on

the contrary can also lead to abuse and misuse of logical connectives, affecting the whole English learning environment. In addition, learners have no chance to contact with the real English environment also leads to all these misunderstanding of logical connectives usage for Chinese English learners.

In order to solve the problem of overuse and misuse of logical connectives, the teacher should take more responsibility by not only emphasizing the logical connectives to writing coherence function. Some experts find that teachers emphasis too much on learner of exaggerating the role of the logical connectives in the expression of English. It can't make students become familiar with language features and grammatical functions. The author thinks that the key to solve these problems is to make learners understand the right method of using logical connectives in English rather than just the brief explanation in current English teaching material. For certain well-founded English learners, study based on the corpus is a kind of effective resources. It helps the teacher show how English-speaking learners really act in using of logical connectives and helps the Chinese learners to understand the real English language environment so that they can master the correct rules of logical connectives. On the other hand, it can help the learners learn to use corpus resources, let the students learn by self searching and comparison to solve the difficulties, finally achieving the purpose of the proper using of logical connectives.

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REFERENCES

- [1] Qiufang Wen; the Colloquial Tendency in Chinese College Students' English Writing [J], Foreign language teaching and research, **7**, 268-274 (2003).
- [2] Jing Wu, yu-zhi shi; Grammar Commonness and Individuality in English-Chinese Parallel foreign language journal, **3**, 51-59 (2005).
- [3] shui-lian wang; Rhetorical Structure Theory and Function of Discourse [J], Foreign language and foreign language teaching, **3**, 26-31 (2001).
- [4] xin-ren Chen; Words to Contact Language and English Writing to Develop Argumentative Essays: Investigation and Analysis [J], Foreign language teaching and research, **5**, 42-48 (2002).
- [5] Meihua Song, Weirong Xia; Discourse Cohesive Devices in English Writing and Language Teaching for Statistical Analysis of Non-English major freshmen Undergraduates good writing [J], Foreign language world, **6**, 33-37 (2002).
- [6] jin-hai wen; Cognitive Discourse Cohesion and Coherence of Cross-domain Integration [J], Journal of foreign languages, **4**, 17-20 (2013).
- [7] Junhua Mo; The Study of Causal Conjunctions in Writing the Argument Corpus Used by Chinese Students [J], Foreign language teaching, **5**, 33-35 (2005).
- [8] Lin Yang; A Comparative Study on Understanding of Discourse Structure and Evaluation from Chinese Readers and the American Readers, **1**, 26-28 (2011).
- [9] Fan Pan, Yuejin Feng; The Survey on Conjunctions Corpus in Writing of Non-English Major Graduates [J], Modern language, **2**, 36-39 (2004).
- [10] Weibin Zhao; Quantitative Analysis of Logical Connectives Used in Chinese Students' Composition [J], Foreign language teaching, **2**, 12-14 (2003).