

The Comparison of Intermediate and Advanced Chinese Learners' Use of English Adverbial Connectors in Academic Writing

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Most of the people think that coherence is harder to sustain in writing than in the speech since there are no clues for us to confirm the comprehensibility of our text. Therefore, in order to achieve effective communication, the writer needs to make his patterns of coherence (usually through paragraph unity and sentence cohesion) much more explicitly. One way of attaining this is to use transitional words/connectors to show the logical flow or semantic relations between sentences and paragraphs.

The aim of this study is to compare the intermediate and advanced Chinese learners' use of English adverbial connectors with a view to understanding their *degree of nativeness* and *the developmental differences* in academic writing. The study adopted a corpus-based approach to examining the learners' atypical or unconventional patterns of connector usage. The intermediate Chinese learner corpus consists of 35 essays, totaling 35,000 words, written by the second-year medical students at Chung Gung University. The advanced corpus comprises 46 essays, totaling 30,000 words, written by the Master's students of English at National Taiwan Normal University. The concordancing package, WordSmith, was utilized to analyze the two EFL learner corpora.

The results show that the overuse phenomenon among the Chinese learners is striking. The investigation of type-token ratio further reveals that the Chinese learners are less diversified in the use of adverbial connectors, i.e. they tend to rely on a common set of connectors in general. The tendency to overuse adverbial connectors is stronger among the intermediate CGU Chinese learners who nevertheless exhibit a more native-like pattern of usage in the individual connectors. On the other hand, surprisingly, the advanced NTNU Chinese learners adopt a more informal style in their English academic writing.

1. INTRODUCTION

There are several kinds of English connectors, such as *however* (to indicate a contrast), *furthermore* (to indicate an addition), *therefore* (to indicate a cause and effect), etc. These connectors are thought to function as bridges between paragraphs and act like glue by sticking sentences together. With connectors, the readers can have a better understanding of the writer's ideas because connectors lead them smoothly from one idea to another without abrupt jumps or breaks. Although research findings about connector usage are sometimes contradictory and inconclusive, researchers and teachers, however, agree that *when appropriately used*, connectors can contribute to a better communication (Flowerdew & Tauroza, 1995; Mauranen, 1993; Campoy et al., 2010; Tyler, 1994) and the ability to use connectors is an indicator of language proficiency for both native and non-native learners (Deng, 2006; Goldman & Murray, 1992; Johnson, 1992; Lorenz, 1998).

Yet, it seems that the connector usage among language learners, especially foreign language learners is problematic (Bolton et al., 2002; Crewe, 1990; Deng, 2006; Heino 2010; Lee, 2013; Marco & José, 2010; Zhang, 2014). First, connectors are not always needed since there are alternatives to achieve coherence and cohesion, such as writing a topic sentence, using antonyms, synonyms, repetition, substitution, reference (pronouns, possessive forms, demonstratives, and the like), etc. That is why a high frequency of connectors in a text does not guarantee its

comprehensibility and clarity. Second, if they are to be used, connectors need to be used with discrimination. That means learners need to have a clear idea about the types of connectors and their usage. Not just simply displaying words, this knowledge actually involves cognitive strategies such as planning, deduction, induction, inferencing, comparison/contrast, grouping, etc. Third, the connector usage is sensitive to register variation (Altenberg and Tapper, 1998). Different registers employ a different set of connectors. To be able to use connectors appropriately and effectively, learners need to be familiar with different genre types and demonstrate this knowledge in their writing. Therefore, connector usage can be said to depend on learners' level of proficiency and their learning context, including their exposure and how the instruction is delivered.

Moreover, since there are not identical mappings between connectors among languages, the use of connectors is beyond one-on-one word translation. Without this knowledge and awareness, learners sometimes make a mistake due to L1 transfer.

This study was inspired by Altenberg and Tapper's work (1998) on "The use of adverbial connectors in advanced Swedish learners' written English" and other previous similar studies (Bolton et al., 2002; Deng, 2006; Heino 2010; Lee, 2013; Marco & José, 2010; Zhang, 2014). These studies yield mixed results. In Altenberg and Tapper's (1998) study, the advanced Swedish learners were found to underuse connectors in general, compared to native speakers and the other EFL learners, but their use of individual connectors somewhat varied. In Bolton et al.'s (2002) study, the learners overused a wide range of connectors but did not show significant underuse. On the contrary, the Swedish learners in Heino's (2010) study underused connectors and relied on a small set of connectors. In a different vein, the learners in Marco & José's (2010) study misused some connectors, positioned connectors differently from native's use, and were found to use informal discourse connectors. Zhang (2014) also found his Chinese learners misused some connectors, while showing both overuse and underuse phenomenon.

2. PURPOSE OF THE STUDY

Relative few studies of Chinese connector usage in EFL writing have been published compared to those of their European counterparts. Even so, previous studies have scantily compared Chinese writers at different proficiency levels but mainly focused on one college level (Chen, 2006; Milton & Tsang, 1993; Zhang, 2000). As suggested by Lee (2013), a comparison of different EFL levels with native writers would be beneficial to detect different patterns or stage improvement of connector usage. Therefore, this study was set out to compare the intermediate and advanced Chinese learners' use of English adverbial connectors in the hope of understanding their degree of nativeness and the developmental differences in academic writing. In order to compare the findings with the similar previous studies, only the use of adverbial connectors, termed as "conjuncts" by Quirk et al. (1985), was examined. The study mainly focused on such phenomena as underuse or overuse by the Chinese learners. In other words, the investigation was essentially quantitative. The misuse phenomenon was not the concern of the study, though it was recognized as an important and to-be tackled issue in subsequent studies.

3. MATERIAL AND METHODOLOGY

The intermediate Chinese corpus consists of 35 essays written by medical students in their second year at Chung Gung University. The essays have an average length of 1,000 words and cover a wide range of interdisciplinary topics, such as aging society, movie industry, gender issues, cultural diversity, virtual reality, ecology, globalization, animal rights, alternative medicine, etc. These are untimed essays and total about 35,000 words in size. The learners were considered to be at least at the intermediate level of proficiency based on their instructors' observation and ACTFL writing guidelines (Revised 1985, Hastings-on-Hudson, NY: ACTFL Materials Center). This learner corpus is referred as CGU in the study.

For the advanced part of Chinese learner corpus, the author collected a sample of 46 untimed essays, totaling about 30,000 words written by the Master's students of English at the National Taiwan Normal University. The essays have an average length of 650 words and deal with such topics as modern spiritual food or trash—TV, the National Normal University as I see, whether there should be a war against terrorism, etc. Based on ACTFL writing guidelines and the strict

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criteria for their entrance exam, the learners were considered to be at the advanced level of proficiency. This learner corpus will be referred as NTNU.

For the remaining corpora, the reference data in the Altenberg & Tapper study were used for cross-linguistic comparison. These include a sample of native English control corpus (LOCNESS), totaling about 50,000 words, the Swedish component of the International Corpus of Learner English (ICLE) also totaling about 50,000 words and the French component of ICLE, totaling 89,000 words. The average length of essays in the corpora ranges from 500 to 1,000 words.

Though the topics in each corpus are not exactly the same, these corpora are thought to be comparable because all of the essays are non-technical—they are either expository or argumentative in essence. The writers in the reference corpora were all university students and they were regarded as advanced in terms of external criteria, i.e. their level of proficiency is defined by referring to the teaching/learning level (in this case—university).

A concordancing package, Word Smith, was adopted to aid in the analysis of connector usage. With the help of the computer program, the speed and accuracy of frequency counts of conjuncts were increased. But the analysis did not totally depend upon the computer. For some parts of the data, human judgments were vital for offering functional interpretations. Because the samples differ from each other in size, counts were calculated in raw and converted into normed and percentage forms.

4. COMPARING CHINESE LEARNER CORPORA WITH OTHER CORPORA

4.1. Overall Frequency

Table 1 shows the overall frequency of conjuncts in the four samples—CGU, NTNU, LOCNESS and SWICLE. Since the corpora differ in size the number of tokens per 10,000 words is given for comparison.

Out of the author's expectation, the overuse phenomenon among the Chinese learners is striking. Table 1 shows that the intermediate CGU learners used more conjuncts in their essays than the advanced NTNU learners (167 vs. 127). While the NTNU learners' conjunct usage (the comparable advanced Chinese learner corpus) outnumbered the native English students and their Swedish counterparts (127 vs. 95 vs. 72). The intermediate Chinese learners even exceeded the advanced Swedish learners by more than two times of conjunct usage.

The investigation of token-type ratio revealed the diversity of conjunct usage in the material (the interpretation is that the smaller the ratio is, the greater the diversity is). Among Chinese learners, the intermediate CGU learners used a smaller set of conjuncts than the advanced NTNU learners (3 vs. 2.23). The NTNU learners in turn used a smaller set of conjuncts than the native English students and their Swedish counterparts (2.23 vs. 2 vs. 1.44). This means that the Chinese learners were less diversified in the use of conjuncts, i.e. they tended to rely on a common set of conjuncts in general.

Table 1. Overall Frequency of Conjuncts in Various Corpora

	CGU	NTNU	LOCNESS	SWICLE
Tokens	584	381	481	366
Tokens/10,000	167	127	95	72
Types	56	57	48	50
Token/Type Ratio	3	2.23	2	1.44

4.2. Semantic Relations

Using Quirk et al's (1985: 634) classification of conjunct roles as reference (Figure 1), the author turns to examine the distribution of semantic types of conjuncts. As shown in Table 2, the distribution is roughly the same across the different corpora. Among the conjuncts contrastive and resultive are the most common semantic types in all of the four samples. Listing is ranked as one of the top three semantic types of conjuncts by Chinese learners and the native students. Summative, inferential and transitional types of conjuncts are rare in all the advanced groups of

corpora. Accordingly, this makes the overuse of inferential conjuncts in the intermediate CGU corpus noticeable.

Since the Chinese learners were remarkably different from the native English students and Swedish learners in the overall conjunct usage, the differences in the distribution of semantic types of conjuncts here are evident. The Chinese learners tended to overuse most of the categories, especially listing conjuncts. Consequently their underuse of some categories seems interesting: the advanced NTNU learners used fewer resultive and corroborative conjuncts—a phenomenon which is shared by the Swedish learners in Altenberg and Tapper's (1998) study.

The learners' overuse of listing conjuncts (e.g. first, second, next, finally) is striking because this category is only used one-third or one-fourth times by the native students and the Swedish learners. If we take a closer look at the material, we can even find a common inferential conjunct, *then* functioning as *next* and *afterwards* in the Chinese corpora. This conjunct, which is found to be used more frequently in the informal registers, is nevertheless less exploited by the native students in their essay writing. A possible interpretation is that this overuse phenomenon is resulted from the learners' communicative competence and their academic background in the following discussion.

Firstly, from the qualitative investigation of the Chinese learner corpora, it is found that the learners tended to use a common set of enumerative conjuncts significantly. From the author's observation of EFL Chinese learners, it is a method of linking the discourse units together for learners of lower level of proficiency. Obviously, the Chinese learners preferred making their ideas explicitly listed and arranged in sequence. Secondly, since the intermediate CGU Chinese learners were medical students, their academic discipline might have an effect on their essay writing. That is, the strict logical thinking pattern prevailing this particular group of learners might influence their choice of conjunct words. This assumption is also supported by their significant overuse of inferential conjuncts, which requires learners to infer a fact from the related text—a manifestation of scientific logical thinking. Such a category of conjuncts, however, is rare in the NTNU Chinese corpus and clear cases of inferential relation could not be found at all in the native and Swedish corpora.

Apart from the widespread overuse pattern, there are categories that the Chinese learners' use of conjuncts compares fairly well with those of the native students. The intermediate CGU learners had an approximately equal share of corroborative conjuncts as the native students while the advanced NTNU learners had almost the same amount of appositive conjuncts as the natives. The learners seemed to act like a native does in these two categories.

(a) Listing	(i) enumerative (e.g. for a start, finally, first, second)
	(ii) additive: equative (e.g. in the same way, likewise) reinforcing (e.g. moreover, further)
(b) Summative (e.g. in sum, altogether, all in all, in conclusion)	
(c) Appositive (e.g. for example, namely, i.e.)	
(d) Resultive (e.g. as a result, consequently, accordingly, therefore, hence, thus)	
(e) Inferential (e.g. in that case, then, otherwise)	
(f) Contrastive	(i) reformulatory (e.g. more precisely, rather)
	(ii) replacive (e.g. better, again)
	(iii) antithetic (e.g. by contrast, instead, on the contrary)
	(iv) concessive (e.g. in any case, however)
(g) Transitional	(i) discursal (e.g. by the way, incidentally)
	(ii) temporal (e.g. in the meantime, meanwhile)
(h) Corroborative (e.g. actually, in fact, of course, indeed)	

Figure 1. Classification of conjunct roles (adapted from Quirk et al 1985: 634)

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Table 2. *Distribution of Semantic Types of Conjuncts*

Category	CGU		NTNU		LOCNES		SWICLE S	
	n	n per 10,000	n	n per 10,000	n	n per 10,000	n	n per 10,000
<i>Listing</i>	152	43.4	108	36	56	11.1	57	11.2
<i>Summative</i>	11	3.1	14	4.7	10	2.0	12	2.4
<i>Appositive</i>	51	14.6	32	10.7	53	10.5	70	13.8
<i>Resultive</i>	137	39.1	62	20.7 (-)	142	28.0	80	15.8 (-)
<i>Inferential</i>	44	12.6	15	5	0	0	0	0
<i>Contrastive</i>	143	40.9	125	41.7	169	33.2	95	18.7 (-)
<i>Transitional</i>	8	2.3	7	2.3	0	0	2	0.4
<i>Corroborative</i>	38	10.9	18	6 (-)	52	10.3	50	9.9 (-)
<i>Total</i>	584	166.9	381	127.1	482	95.0	366	72.2

(-) represents the underuse compared to LOCNESS

4.3. Individual Conjuncts

It is also interesting to look into the dispersion of the high frequency of conjuncts in the materials. Table 3 shows the top ten conjuncts in various corpora. To broaden the picture of analysis, the data of French corpus were added to the material.

Amazingly, seven of the listed conjuncts are identical in four of the five corpora, with the NTNU group as an exception. This shows that most of the native students and the EFL learners rely heavily on a few of the same conjuncts. However, as pointed out by Altenberg & Tapper (1998), the tendency to utilize a limited set of conjuncts is especially strong among the native students (76 % out of the total). The proportion of the top ten conjuncts in all the EFL learner corpora ranges from 58% to 60%. This similar pattern of distribution is interesting and deserves further investigation.

The data shown on Table also reveal that the advance NTNU Chinese learners deviated from the other groups of students in the distribution of the high frequency of conjuncts. Only four of the listed conjuncts are the same as the other corpora. However, taking a closer look, the learners are rather native-like in terms of the use of the top three conjuncts: *however*, *therefore*, and *thus*. Yet, in terms of the overall pattern of the individual conjuncts, it is the intermediate CGU learners, not the advanced NTNU learners who wrote more like a native learner does in the use of conjuncts.

Likewise, since the Chinese learners' overuse phenomenon is significant almost across all the conjunct types, the overuse of the individual conjunct is also apparent in both of the CGU and NTNU corpora. Compared to the native English students, the underused conjuncts by both of the Chinese groups are *however* and *for example*. The former is a contrastive conjunct that is predominantly used by the native learners—nearly 25% of the total. The latter is ranked as the 7th in NTNU corpus and the 9th in CGU corpus while it is positioned in the top four conjuncts in the native corpus and the two European EFL corpora. These two underused conjuncts rule out the widespread overuse phenomenon by Chinese learners.

Among the overused conjuncts by the Chinese learners, *then* and *besides* (including its variant, *in addition*) are noteworthy since none of them are on the high frequency list in the other corpora. The tendency to overuse these two conjuncts by the advanced NTNU Chinese learners is even stronger if we add up *besides* and *in addition* and treat them as the same conjunct in terms of functional use. A scrutiny of these 2 conjuncts in the two-million-word BNC sampler reveals that they are often used as an informal connector. This implies that the Chinese learners adopted a

less formal way of writing in their essays, particularly for the NTNU learners if we take into consideration their use of *though* (also an informal conjunct) in their essays. This non-native, informal, stylistic writing is further confirmed by examining the distribution of *but*. *But*, a common contrastive connector in informal register in English (Altenberg, 1998), was exploited by the Chinese learners significantly. As a matter of fact, if we count it as a conjunct used in the samples, it would then mount to the top one conjunct in both of the Chinese corpora.

Table 3. Top Ten Conjuncts in Various Corpora

	CGU	n	n per 10,000	%	NTNU	n	n per 10,000	%	LOCNESS	n	n per 10,000	%
1	<i>however</i>	71	20.3	12.2%	<i>however</i>	50	16.7	13.1%	<i>however</i>	122	24.4	25.4%
2	<i>therefore</i>	68	19.4	11.6%	<i>therefore</i>	30	10.0	7.9%	<i>therefore</i>	55	11	11.4%
3	<i>then</i>	69	19.7	11.8%	<i>thus</i>	25	8.3	6.6%	<i>thus</i>	42	8.4	8.7%
4	<i>so</i>	30	8.6	5.1%	<i>besides</i>	23	7.7	6.0%	<i>for example</i>	36	7.2	7.5%
5	<i>although</i>	27	7.7	4.6%	<i>then</i>	23	7.7	6.0%	<i>so</i>	33	6.6	6.9%
6	<i>that is</i>	19	5.4	3.3%	<i>though</i>	19	6.3	5.0%	<i>of course</i>	22	4.4	4.6%
7	<i>in other words</i>	18	5.1	3.1%	<i>for example</i>	16	5.3	4.2%	<i>in fact</i>	16	3.2	3.3%
8	<i>indeed</i>	16	4.6	2.7%	<i>moreover</i>	14	4.7	3.7%	<i>that is (i.e.)</i>	14	2.8	2.9%
9	<i>for example</i>	13	3.7	2.2%	<i>although</i>	10	3.3	2.6%	<i>yet</i>	13	2.6	2.7%
10	<i>besides thus</i>	12	3.4	2.1%	<i>In addition</i>	10	3.3	2.6%	<i>indeed</i>	12	2.4	2.5%
	Total	343	98.0	58.7%	Total	220	73.0	57.7%	Total	365	73	75.9%

(Table 3 Continued)

	SWICLE	n	n per 10,000	%	French EFL learners	n	n per 10,000
1	<i>for example</i>	39	7.8	10.7%	<i>in fact</i>	82	8.2
2	<i>however</i>	32	6.4	8.7%	<i>so</i>	78	7.8
3	<i>of course</i>	31	6.2	8.5%	<i>indeed</i>	72	7.2
4	<i>so</i>	26	5.2	7.1%	<i>for example</i>	60	6.0
5	<i>therefore</i>	26	5.2	7.1%	<i>for instance</i>	60	6.0
6	<i>thus</i>	18	3.6	4.9%	<i>of course</i>	59	5.9
7	<i>for instance</i>	13	2.6	3.6%	<i>moreover</i>	58	5.8
8	<i>that is (i.e.)</i>	13	2.6	3.6%	<i>however</i>	52	5.2
9	<i>still</i>	11	2.2	3.0%	<i>thus</i>	40	4.0
10	<i>furthermore</i>	10	2.0	2.7%	<i>on the other hand</i>	39	3.9
	Total	219	43.8	59.8%	Total	600	60.0

5. DISCUSSION AND CONCLUSION

Before relating the findings to some pedagogical implications, it needs to be clarified that the term 'nativeness' is used as a descriptive word here in the study. Non-nativeness does not imply any incorrect usage; instead, it depicts deviations from the norm, from sounding like a native (it is just a label to check something like whether a learner in Rome acts like a Roman does). This understanding needs to be born in mind when we discuss the advanced learners' any overuse or underuse phenomenon. The advanced learners are regarded as 'advanced' because they are thought to have mastered the basic rules of grammar already. Therefore, their deviations could result from para/metalinguistic concerns, e.g. due to stylistic concerns or concerns that are regarding finer points of lexicon-grammar (Lorenz, 1998).

The main conclusion of the study is that the Chinese learners deviated from the English norm by overusing conjuncts significantly. They also differed from their European counterparts in that the Swedish and French learners tended to underuse conjuncts in general. In the author's experience, both as an EFL teacher and learner, the massive overuse could have something to do with a certain degree of insecurity among non-native speakers concerning the effectiveness of their writing. When there is no body language to resort to and non-verbal clues available for ensuring the comprehensibility of their discourse as in the speech, the learners might seem to be too anxious in making their texts cohesive and understandable. As a result, the numerical excess of conjuncts reveals a "too much effort" phenomenon that is often cited as typical of non-native style (Lorenz, 1998).

Apart from looking at both the Chinese groups as a whole, these two groups of learners in fact differed from each other in some respects. The tendency to overuse conjuncts is stronger among the intermediate CGU Chinese learners who nevertheless exhibited a more native-like pattern of usage in the individual conjuncts. On the other hand, the advanced NTNU Chinese learners adopted a more informal style of writing in their argumentative/expository essays. Whether this stylistic difference is due to gender difference (since 90% of the CGU learners are male and 99% of the NTNU learners are female) deserves follow-up investigation.

The main pedagogical implication drawn from this study is that the intermediate CGU Chinese learners needed to learn to economize their conjunct usage, get to know the alternatives for making their texts cohesive and coherent, and maintain their already 'on-the-right-track' habit of individual conjunct use. While the advanced NTNU Chinese learners needed to develop a sensibility to register awareness and refine their conjunct usage by minimizing some redundant ones.

With the findings, the author agrees that EFL learners should increase their knowledge of registers and genres as suggested by some researchers (e.g. Chen, 2006; Granger & Tyson, 1996; Granger, 1998; Lee, 2013; Marco & José, 2010). EFL instructors are advised to teach learners how to use adverbial connectors appropriately and inform them of using alternative connectors correctly (Crew, 1990; Granger & Tyson, 1996; Heino, 2010)

Due to the limited sample size, the conclusions of the study are obviously inconclusive. Some of the interesting findings need to be further explored by means of larger Chinese learner corpora. Yet, even a case study like this has demonstrated the power of corpus-based approach (Sinclair, 2004) in foreign language acquisition. The "accumulated effect" of Chinese learners' overuse phenomenon would not be revealed if not employing large numbers of data as this study did.

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