

The Application of Corpus in English Writing Teaching in Senior High School from the Perspective of Error Analysis Theory

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Abstract: English Curriculum Standards for Senior High School (2017 edition) proposes that senior high school English curriculum should make full use of information technology and promote the deep integration of information technology and curriculum teaching. The writing teaching with the aid of corpus and under the guide of the theory of error analysis, will help students to increase effective language input, to help students to avoid or less make some semantic and syntactic errors caused by negative transfer of mother tongue in writing task. Based on the corpus-driven learning model, teachers can construct a corpus that conforms to students' learning rules to assist the formation of a new teaching model of high school English writing speech and comment, which can help students correctly understand mistakes and improve their writing skills and written expression ability.

Key words: corpus; senior high school; English writing teaching; error analysis theory

I. Introduction

Written expression counts heavily in high school English papers, whose quality reflects a student's English level to a great extent. Foreign language writing is one of the basic skills of language application for students, which shows a personal ability to use language to communicate and is also the most difficult English application skills for Chinese high school students. Therefore, the discussion of English writing teaching issues is of great significance. In students' daily English writing practice, the wrong use of non-predicate verbs is frequent, which reflects that there are problems in explaining and practicing the usage of non-predicate verbs in English writing teaching. Exploring these questions is helpful to understand students' mastery of this grammar point, besides, it can help to reduce the occurrence of similar interlingual errors in writing, and help students to eliminate the main obstacles in English writing, improving students' English writing level, and improving the quality of students' writing.

This paper first introduces the definition and classification of error analysis theory and the meaning of corpus linguistics and briefly expounds the previous research on the application of corpus to English writing

teaching in senior high school. After analyzing the reasons why students make mistakes in writing, this paper presents a case of using corpus to assist English writing teaching in Grade One.

II. Error analysis theory and corpus linguistics

Error analysis theory is an important branch of applied linguistics, which mainly discusses the main errors in language expression from the perspective of language output.

2.1 Definition of error

What's the mistake? Different people have different ways to describe it. Linguists and researchers are constantly revising and refining the definition of error. A British linguist called Corder (1967) believes that errors are caused by the deviation of language rules because learners have not yet mastered the rules of the target language system. Richards (1971) believes that error is the deviation of the language used by second language learners from the rules of language use of the target language. Dulay (1982) defined mistakes in this way: mistakes are defective parts in learners' language or writing, which deviate from mature language expression rules. Lennon Paul (1991:19) argued that the definition of error is "a form of language that is absolutely impossible for a native speaker to say under the same context or language output conditions". Although different scholars have different definitions of error, they all have a common point in their definitions of error, that is, they all believe that error deviates from the language application rules of the target language.

2.2 Classification of error

When Corder proposed the theory of error analysis, he believed that errors were systematic. Corder (1974) divided errors into three categories: pre-system errors, in-system errors and post-system errors. Pre-systematic errors are defined as follows: when the learner does not know that a specific rule exists in the target language. In this period, learners lack the mastery of the target language, causing that errors occur randomly and irregularly. When mistakes occur, learners are unable to explain or correct them. Systematic errors refer to that learners still do not master the complete target language rules in the second stage, and their knowledge rules are not correct or comprehensive. Learners still cannot correct the mistakes at this stage. The error in this case is due to the wrong generalization of the rules. Post-systematic errors refer to the mistakes that occur due to lack of practice or habit formation after learners have mastered the correct and complete rules of the system. Richards (1971) classified errors into three other types: interlingual error, intralingual Error and Developmental Error. Interlingual error refers to the interference caused by a learner's mother tongue. Learners bring the language and cultural habits of the native language into their learning and application of the target language. Intralingual error refers to that learners master some rules of the target language and internalize these rules, but make mistakes due to incomplete and inaccurate understanding. Intralingual errors are caused by overgeneralization, neglect of rules, incomplete application of rules and false conceptual assumptions. Developmental error is a kind of "intermediary language" or "interlanguage" created by learners using their existing knowledge structure and experience to transition to a standardized language. Such mistakes may occur in second language learning, which reflects the general characteristics of language learning. Therefore, from different perspectives, errors can be classified differently. After the author used the seven-day online marking system to assist in evaluating the English compositions of liberal arts students in senior one, the system pointed out a persistent error in students' writing: Interlingual errors. As many language learners in China do not understand or have little understanding of the cultural customs of the target language, they directly adopt the cultural habits of their mother tongue when using the target language, leading to vocabulary and grammar errors (Zheng Shuang, 2016).

2.3 Definition of corpus linguistics

Corpus linguistics is a kind of research method in a sense, which needs to be realized with the help of computers. Leech (1994) believes that corpus linguistics is computer corpus linguistics. According to He Anping (2004) reckons that corpus linguistics is specialized in studying a large number of corpus data stored in computers. According to the definition of corpus linguistics, we know that corpus linguistics can improve the limitations of traditional error analysis. With the help of computer retrieval tools, researchers can quickly and accurately present useful data such as the type and frequency of errors.

2.4 The application of corpus in English writing teaching in Senior high school

With the development and popularization of modern educational technology, more and more English teachers have access to corpus, and their application of corpus in English teaching has significantly improved the classroom teaching effect. In the 21st century, the use of corpus in English teaching has become widespread. The academic research on the use of corpus in English writing teaching in senior high schools has also risen in the past 10 years, declined in 2016, and reached a peak in 2020, with 7 related papers published. Some papers discuss how corpus can assist English writing teaching in high school from a generous perspective. For example, Chen Jiajing (2010) established a small corpus for students in the college entrance examination English excellent composition and analyzed the use of conjunctions, and it is concluded that teachers in teaching should pay attention to impart knowledge and provide students with the correct language input when teaching writing, so as to effectively solve the high school students in the use of conjunctions lack of diversity in writing. Some of the research is more targeted, Zhao Xue (2021) merged lexical chunks teaching method based on the corpus into the high school English writing teaching, making the corpus content combined with modern information technology means, and helped students to better grasp the meaning of language chunks, usage, and collocation, and language teaching can effectively improve the efficiency of learners' writing, overcome the negative influence of mother tongue migration. She uses test method, questionnaire survey and interview method to conduct the research, and concludes that the corpus based language block teaching method can increase the number and diversity of language blocks in the composition of students, and has a positive impact on improving the writing level and enthusiasm of high school students and writing teaching of English teachers.

In addition to applying the corpus in the process of English writing, some scholars give feedback to students' English compositions based on the electronic text base of authentic language materials. Based on output hypothesis, corpus linguistics theory and zone of recent development theory, Chen Zhuojun (2019) analyzed the experimental data and concluded that corpus-based writing feedback teaching can better improve students' English writing level and ability to use writing strategies compared with traditional teacher feedback teaching. In this paper, we explore the theory of error under the perspective of the application of corpus in the high school English writing teaching, the purpose is to change the traditional teachers' common errors in the analysis of students' composition, making students to recite the model essay writing evaluation models, increasing writing about evaluation of interest, and it aims to strengthen students' writing motivation, improve their writing ability, provide new ideas for high school English writing teaching.

III. Analysis of the cause of the error

In the process of revising students' compositions, the author found that there are mainly three kinds of infinitive errors in English compositions of senior one students: Misuse of "to do" as "do"; Misuse of "to do" as "to doing"; Misuse of "to do" to "doing". Infinitives are the key and difficult points of high school English learning, and it's regarded as the most important part of non-predicate grammar, so It is the high frequency test point in the college entrance examination paper. The degree of students' mastery of the knowledge point will affect their written expression level to a great extent.

On the basis of the error analysis theory of predecessors, the author counted the main errors of students in the examination marking process, and analyzed some mistakes with specific examples. Combined with the experience in class and correcting compositions, it is found that the main reasons for students' incorrect use of infinitives in English writing include native language interference, target language interference, students' attitude towards English learning, teachers' teaching methods and so on.

3.1 Mother tongue interference

Native language interference refers to the difference between the native language and the target language that causes students to make mistakes. Chinese students learn English in a Chinese environment, so it is inevitable that their inherent thinking mode and knowledge system will interfere with English learning to a certain extent (Ren Ping, 2010). George (1972) argued that "about one third of the mistakes made in learning the target language can be attributed to "mother tongue interference". Therefore, it is important to carefully study the degree to which learners are affected by Chinese in English learning and which aspects are susceptible to interference from their mother tongue, and find out the rules so as to guide students to avoid making these mistakes as much as possible (Lin Ruchang, 1994). The author found that students unconsciously apply Chinese rules to English learning, especially in English writing, resulting in interlingual errors caused by mother tongue interference. When sorting out the errors in the use of infinitives in the English composition of senior One students, the author found that the errors of tense and voice and subject-verb agreement are very typical mistakes caused by the interference of mother tongue. In Chinese expressions, tense and voice changes mainly depend on certain words, such as: 了, 正在, 将, 准备, 被, 把 etc., while the verb itself does not change. However, in English-speaking countries, the change of tenses and voices is mainly reflected by the change of verbs, such as shall/will+do in the simple future; the change of verbs in the simple past can be divided into regular and irregular verbs; the present continuous is expressed by the structure of be+doing, etc. Due to the difference between the native language and the target language, students will habitually use their familiar native language -- Chinese in writing, and then translate it into English in their mind. This process of English and Chinese translation is prone to various grammatical errors.

3.2 Target language interference

Target language interference refers to the fact that students have learned some rules of the target language, but due to the incomplete grasp of the rules of the target language, they make mistakes when using the target language. The more time passed and the more learning knowledge and grammar rules they learned, the more mistakes will be caused by target language interference. By sorting out the errors in the use of infinitives in the English composition of senior one students, the author finds that infinitives errors are usually caused by the interference of the target language. After analyzing the students' English compositions, the author found that the errors caused by the interference of the target language are mainly manifested as overgeneralization of some language rules, which leads to the errors. Take a sentence as an example, "People need sign up for the Dragon boat races before the Dragon boat Festival". (but the correct expression is as follows: People need to sign up for the dragon boat races before the Dragon Boat Festival.) In this sentence, "need" as a substantive verb has a practical meaning, so "需要做某事" should be expressed as "need to do something", and the mistake students make is to overgeneralize the use of "need" as a modal verb, thinking that in this expression, "need" also acts as a modal verb, so it should be followed by its base form.

3.3 Students' attitude towards English learning

Students' attitude towards writing is another reason for their mistakes in English writing. Many students were not interested in English in junior high school, or didn't take learning seriously at the beginning, the

foundation was not steady, so that in high school learning, they may directly give up the study of English under the increasing academic pressure, let alone writing the composition. Some students think that writing is an open-ended task, and the teacher will give them discretionary marks as long as they write a few sentences about the topic, so they don't care about one or two infinitive mistakes. Some students think that there are 150 points of the whole test paper, and the writing task only accounts for 25 points, as long as the preceding questions get good marks, they can only spend a little time to write the composition. Time is so urgent that students do not have time to think carefully, directly leading to improper choice of verbs and infinitive mistakes without making a brief draft. Therefore, the overall enthusiasm of students in English writing is not high, the motivation is not strong, and the error rate is high.

3.4 The teaching methods of teachers

The author asked a few novice teachers who teach students of the arts subjects in a high school about the way they usually teach writing. Due to the heavy course tasks and the large number of students in a class, the teacher would only circle the mistakes and give scores for each weekly exam, failing to mark each mistake. Therefore, some students could not get effective feedback for their mistakes, and they might make the same mistakes in the next writing. The teacher used a single teaching method to explain the composition -- picking out the typical common mistakes, reckoning that infinitives should be explained in grammar lesson, and giving model examples for students to recite. This way of assessing writing is not only monotonous, but also divorced from the context of the discourse, which leads to the failure to mobilize their enthusiasm of writing, and their writing ability is difficult to improve.

IV. Research on the practice of writing teaching in high school assisted by corpus

The author made an overall analysis of the errors in the use of infinitives in the English composition of senior high school students when reviewing 403 papers from 8 classes of senior high school liberal arts classes. In order to further explore the causes of incorrect use of infinitives in learning English, it is necessary to carry out an example analysis of the students' mistakes after the overall analysis of the mistakes of using infinitives in the English composition of the students in senior one. Their errors are mainly attributed to the difference in form between English and Chinese. Chinese does not have inflections like English verbs. A sentence in Chinese can have more than one verb, but in English, a sentence can have only one predicate verb. All other verbs in this sentence are either non-predicate, joined by conjunctions or become a verb in a clause. Therefore, this kind of interlingual error they made in their composition leads to the wrong choice of verbs in non-predicate verbs and infinitive errors.

【Teaching Case】

Step1: Situation analysis

Typical mistakes students make when using infinitives are as follows:

- (1) You want know Chinese Dragon Boat festival.
- (2) I would like tell you some celebrations about this traditional festival.
- (3) On that day,I will help my mother making Zongzi.

There are two main types of mistakes: first, the verb is directly followed by infinitive "todo" as the object (with and without to); the second is their choice of verbs followed by infinitives as object

complement. Therefore, this case will search for some verbs often used in writing, and discuss the infinitive object and object complement after it.

Step2: Summarize the verb forms that follow the logical subject in the sentence pattern of "there be"

The author use Antconc 3.2.1 Concordance tools and take "hope, want, would like, help" as retrieving items, such as in the brown Crown_CLOB corpus (Built by Associate Professor Xu Jiajin and Professor Liang Maocheng in 2012, the corpus consists of Brown, Frown and Crown), searching in Brown in Crown_CLOB corpus, getting 658 cases of the usage of "want" (see Figure 1 for lines that are partly cited) and 72 cases of the usage of "would like" (see Figure 2 for lines that are partly cited).

Hit	KWIC	File
3	. It's good for skin . If you want a healthy body. You need wat	ST2.txt
4	Once you start to eat it, you want to eat more of it. they're	ST2.txt
5	d have bad teeth . So, if you want to have a healthy body, Ple	ST2.txt
6	althy diet?" I think everyone want to know it. The healthy food	ST2.txt
7	le need energy to live, so we want to eat foods. Foods can chan	ST2.txt
8	d. A HEALTHY DIET Everybody want a healthy diet. That is can	ST2.txt
9	ve weight problem. So, if you want to have a healthy body , you	ST2.txt
10	urney, I knew a truth: If you want to study well, you have to g	ST2.txt
11	at that time. If the teacher want me to answer the same questio	ST2.txt
12	y grandpa had died. My father want to buy sth to him and put	ST2.txt
13	d to adventure. But we didn't want to disobey our parents. At la	ST2.txt
14	to my mother: " Mum, I won't want to stay here any more, I want	ST2.txt
15	want to stay here any more, I want to go home, I miss you and f	ST2.txt
16	ed was not good, but I didn't want to lose this friend, so I dic	ST2.txt
17	e, I have many nice dreams. I want to be a clever lawyer, an out	ST2.txt
18	oad in Austria is my dream. I want to be a student there. Dream	ST2.txt
19	you certainly like. When you want to take a rest, you can sit	ST2.txt
20	to shoos fomr . What do you want to buy? You just go to ther	ST2.txt
21	This story are very good. I want to be a vrave people like H	ST2.txt
22	if you come in the shop, you want buy some things of you schoo	ST2.txt
23	I get here buy fruit, today I want to buy two kilo apples." " Oh	ST2.txt
24	t middle school of Beijing. I want to ask some questions in "	ST2.txt
25	say "He is taller than me " I want to know which is right, and w	ST2.txt

Search Term Words Case Regex
 want Advanced Concordance Hits 192 Search Window Size 50

Figure1 Partial index lines of "want" in Brown's corpus

Hit	KWIC	File
5	Country Club for those who would like to bring the bundles on th	Brown.txt
6	Although both concede they would like to hit 60, they stick pri	Brown.txt
7	io. Ideally, the President would like the French to agree on a	Brown.txt
8	however the President, who would like to woo the former Chinese	Brown.txt
9	of his leading supporters would like. His election, on the oth	Brown.txt
10	shall Field and Company, I would like to challenge an old and h	Brown.txt
11	pe our own destiny. @ I would like very much, on behalf of m	Brown.txt
12	he made four points that I would like to question. _1_ He m	Brown.txt
13	on strolling with a dog? I would like to suggest that the landl	Brown.txt
14	er ship or expulsion". I would like to quote from the Charter	Brown.txt
15	"peaceful coexistence" and would like, above all, the Berlin and	Brown.txt
16	t wars of liberation" they would like to embark on before long:	Brown.txt
17	e. #TENURE AS CRITERION# I would like to add one more practical	Brown.txt
18	ERN CALIFORNIA BLACKOUT# I WOULD LIKE to see you devote some sp	Brown.txt
19	multaneous impressions. He would like to put several sentences	Brown.txt
20	a specific country. If you would like to start your tour in Ita	Brown.txt
21	it belongs. ## Perhaps you would like to become a writer. This	Brown.txt
22	y the kind of character we would like to be. We must realize wit	Brown.txt
23	producer asked her if she would like to be in one of his shows.	Brown.txt
24	what you say. Of course, I would like to go to an out-of-town s	Brown.txt
25	ravel around the world. We would like to do that too". "But	Brown.txt
26	s as well as she did. I would like to straighten out a miscor	Brown.txt
27	at there are some such) I would like to say what I have alread	Brown.txt

Search Term Words Case Regex
 would like Advanced Concordance Hits 72 Search Window Size 50

Figure2 Partial index lines of "would like" in Brown corpus

The case analysis of these mistakes students have made is conducive to students directly know the existence of mistakes, clearly understand the applicability of grammar and its importance in writing, and also helps the author to understand the specific embodiment of mistakes more clearly and intuitively, laying a foundation for the analysis of the causes of mistakes.

Step3: Conclude the verbs can be used in the infinitive "to do" as the object and the object complement

The author log in <https://www.english-corpora.org/coca/> website and type "VERB to do" under the List, and will get the most commonly used verbs that take the infinitive "to do" as its object. The author selected

15 verbs that have a high frequency of use for students to observe. Figure 3 is the screenshot of the top 15 high frequency words of "VERB to do" in the COCA corpus.

ON CLICK: [CONTEXT](#) [TRANSLATE \(ZH\)](#) [BING](#) [IMAGE](#) [PRON/VIDEO](#) [BOOK](#) (HELP)

HELP	7	SEE FULL LIST (SLOWER; MAY TIME OUT) [?]	FREQ	TOTAL 195,403 UNIQUE 381 +
1	<input type="checkbox"/>	GOING TO DO	37827	
2	<input type="checkbox"/>	WANT TO DO	31441	
3	<input type="checkbox"/>	NEED TO DO	15075	
4	<input type="checkbox"/>	TRYING TO DO	12169	
5	<input type="checkbox"/>	WANTED TO DO	11529	
6	<input type="checkbox"/>	GOT TO DO	8296	
7	<input type="checkbox"/>	TRY TO DO	4846	
8	<input type="checkbox"/>	LIKE TO DO	4845	
9	<input type="checkbox"/>	WANTS TO DO	4331	
10	<input type="checkbox"/>	TRIED TO DO	2984	
11	<input type="checkbox"/>	CONTINUE TO DO	2921	
12	<input type="checkbox"/>	NEEDED TO DO	2366	
13	<input type="checkbox"/>	DECIDED TO DO	2092	
14	<input type="checkbox"/>	NEEDS TO DO	2032	
15	<input type="checkbox"/>	GET TO DO	1523	

Figure3 Screenshot of the first 15 high-frequency words of "VERB to do" in COCA corpus

Step4: Practice to consolidate

The author organized students to correct each other's typical mistakes in their compositions. In addition, the author used the example sentences found in the corpus to design several activities such as filling-in blanks, translating sentences, writing dialogues and practising according to the context and key verbs provided by the teacher, so that the students can apply what they have learned in the stage of constant review, practice and consolidation.

V. Conclusion

English writing is an important part of the high school classroom, which plays a fundamental role in the whole high school English teaching. How to improve the level of English writing teaching in senior high school is a major direction of current research in the field of senior high school English teaching. This article applies the method of case analysis to explore the active function of error analysis theory in writing, as well as the analysis of the corpus application in the high school English writing process. It solves the interference from mother tongue and target language and the low writing motivation. It is of practical significance to help students improve writing ability and promote the improvement of English writing teaching model in senior high school in the future.

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