Computer-Aided Analysis of Tense Errors in Undergraduates' Texts

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Abstract: *This paper made a computer-aided analysis of tense errors in 775 texts written online by the vocational college undergraduates in Shanghai. The data processing is composed of scoring, concordancing, tagging and editing, by utilizing software like PatCount, AntConc, TreeTagger3, SPSS 20, and so on. The following findings are that, first, the subject-predicate agreement error is the most frequently committed tense error by the Chinese English learners, followed by the tense choice error, and finally the tense agreement error. Second, most frequently the learners neglect the rule of the subject of the third person singular in present simple tense, either overgeneralizing this rule or misusing it. Third, the Chinese English learners neglect the connection between the tense and the adverbial of time, resulting in the wrong choice of tense with time adverbials. Fourth, the learners tend to forget to use the past tense in the object clause or in the coordinate clause, or even misuse he past tense. In adverbial clauses, they often mistake the present tense for the past tense. In the end, based on the findings, some pedagogical implications are made for the learners to reduce the occurences of the tense errors.*

Keywords: *Computer-Aided; Data processing; Text analysing; Error analysis*

1. Introduction

In L2 learning, it is inevitable for the learners to commit errors. According to Corder (1967), error refers to the use of a language form (in speech or writing in a second or foreign language) that fluent or native speakers believe shows wrong or incomplete learning [1].

Learners may make the following common tense errors [2]: First, subject-verb agreement: subjects such as "everyone" or "nobody" in a sentence must be consistent with verbs in number; second,words singular in tone must follow the verb in singular tense; third, past tense and usage of "did": "did" guarantees the use of the present tense; fourth, usage of simple past tense and time adverb: the present perfect or past perfect tense is never used with time adverbs related to the past, but only the simple past tense; fifth,the present perfect time replaces the simple past usage: the present perfect tense cannot be used with the adverb of the past time (instead, use the simple past.); sixth, use simple past in place of past perfect in case of continued actions; seventh, misuse the past perfect tense in two actions: when two actions occur in the past, the first action uses the past perfect tense and the second action uses the simple past tense; eighth, misuse the future tense in the clause: if the subject sentence is in the imperative mood, the future tense should not be used in the clause, finally, confuse the present perfect tense with the present continuous tense: the present perfect tense is used for actions that started in the past, has continued in the present and in all probability is still in process, while the present continuous tense is only used for actions that are temporarily in progress now.

According to Godfrey (1980), there are many reasons for attentional bias. For instance, L2 learners need to deal with sentence patterns or newly found structures, or choose appropriate words to improve their writings. Nevertheless, due to the limit of their second language acquisition abilities, working memory and writing time, those attention bias will affect their correct tense use [3].

Dai (1997) assumes the negative transfer of mother tongue, including language transfer, cultural transfer and thinking mode transfer, inevitably affects Chinese learners' expressing timeliness in English [4]. Cai (1999) thinks English emphasizes grammatical formal functions: means, tense and aspect to express temporality, while in Chinese lexical and contextual means (such as time adverbials) are used to express temporality [5].

According to James (2001) there exist four diagnosis-based categories of errors, that is, interlingual

errors, intralingual errors，communicative strategy-based errors and induced errors. Learners' errors caused by misuse of language items with common characteristics with their mother tongue are called interlingual errors (or transfer errors). Errors made within the target language are called intralingual errors (also known as developmental errors).Communicative strategy-based errors occur when learners consciously use some similar equivalent L2 items to express an idea that is not easy to be accepted by learners in L2 communication. And induced errors are the learners' errors resulting from the classroom situation or the textbook, rather than from the intralingual or interlingual factors [6].

Chen (2011) finds non-English majors make tense errors due to the interference of their mother tongue Chinese and their inadequate knowledge of the English rules [7]. Zhao & Liu (2012) confirms that simple past is the most difficult tense for Chinese English majors to master, and they often misuse simple past for simple present tense or present perfect [8]. Shi (2012) confirms simple present, present perfect and simple past are of the highest error frequency among the 16 tenses, and the subject-verb disagreement is frequently connected with simple present and present perfect is often misused in non-objective subordinate clauses [9]. Bai (2014) finds the possible causes of common tense errors include internal factors (interlingual transfer and intralingual transfer) and external factors (communicative strategies, induced factors, writing genre and attentional bias) [10].

Alwan (2020) concludes that intralingual developmental errors stem from ineffective teaching methods, limited language exposure, inappropriate learning methods and students' indifference to the rules of the target language [11]. Lopez et al (2021) confirms that learners are unlikely to correct L2 written errors that they do not need to pay attention to [12].

He (2021) finds the algorithm model can effectively improve the detection accuracy and feedback efficiency of English verb grammatical errors [13]. Liu and Tian (2021) probes the causes of phonetic errors, lexical errors, grammatical errors and pragmatic errors in terms of interlingual transfer, intralingual interference, cognitive and affective factors and communicative strategies [14].

Long & Su (2021) designs a new English grammar error detection model and finds that it can effectively detect English grammar errors, such as articles, prepositions, nouns, verbs and the subject predicate consistency [15]. Wang finds that some common grammatical errors like misuse of past tense, part of speech, existential structure, and topic comment sentences, are mostly caused by the transfer of Chinese [16].

The above literature review shows that scholars at home and abroad have made abundant research on the global errors of second language learners, whereas research focused on the tense errors of undergraduate students in vocational colleges seem to be inadequate. Hence, this paper attempts to analyze the tense errors committed by vocational college undergraduates in their writings aided with computer technology.

The paper focuses on the following questions: what are the most frequent tense errors of the students? How are those tense errors correlated with their writing performances? And what pedagogical implications can be drawn from those errors?

2. Data processing and analysis

The raw data in the study include 775 texts written online by the vocational college undergraduates in Shanghai. The data processing is composed of scoring, concordancing, tagging and editing, with the computer tools like PatCount, AntConc, TreeTagger3, SPSS 20, and so on. Each text is scored in the automated scoring system provided by http://pigai.org/guest.php. The tense error tagging in this paper is from CLEC (Chinese Learner English Corpus) as follows [17]:

<tnl> - subject + predicate agreement

<tn2> - wrong choice of tense with time adverbials; wrong choice of tense

<tn3> - tense agreement
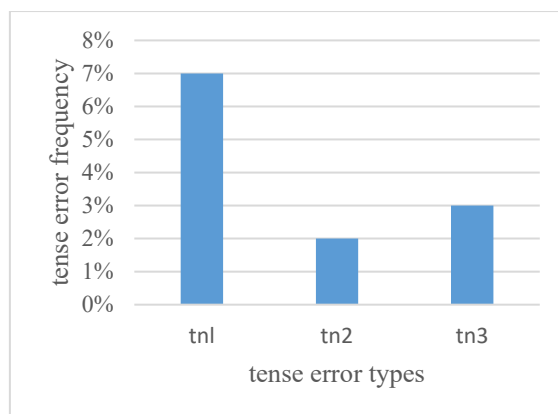
(each of 775 texts, with a mean score of 70.92, min 23.5, and max 88.5)

Figure 1: Descriptive statistics for mean of tense error

Figure 1 shows that the writing proficiency of the vocational college students is quite uneven in level, where the average score is not too bad (with a mean score of 70.92), yet the lowest score falls to 23.5 while the highest is 88.5. The most frequent tense error is tnl, the subject-predicate agreement error, then comes tn3 (wrong choice of tense), and in the end is tn2 (tense agreement error). The following are some of instances from the data (the corresponding correct form of tense error is placed in the blank):

2.1. The instances with tn1 are as follows

eg.1: the most important thing is that it leave <tn1> (leaves) a good impression on mew,

eg.2: The final exam also become <tn1> (becomes) the mountain which we must throw over.

eg.3: Unconsciously, I have spent 40 days of college life, which are <tn1> (was) really full of joys and sorrows,

eg.4: It give <tn1> (gives) me help to go over the difficults.

eg.5: That puppy dog has grown up and still stay <tn1> (stays) with me and my family.

eg.6: my mother who love <tn1>(loves) me most in the word was standing in the rain just for me.

eg.7: And a little girl finish <tn1>(finishes) one's wish…

eg.8: Destiny prove <tn1>(proves) the way for me already.

eg.9: I'm so sad that nobody know <tn1> (knows) today is my birthday.

eg.10: When I after school, my elder brother lead <tn1> (leads) me to home.

eg.11: Many of the spaces is <tn1> (are) taken up by common,…

eg.12: These makes <tn1> (make) me knowledgeable and healthy.

eg.13: The gifts contains <tn1> (contain) three things.

eg.14: Absolutely high-flyers in this world depends <tn1> (depend) on their endeavor.

eg.15: To summarize up, classmate alumni is <tn1> (are) the most unforgettable gifts

eg.16: Is not only a wish she sents <tn1> (sent) to me, but also a precious friendship.

eg.17: I'm so lucky that l own a gift, a gift only belong <tn1> (belonging) to me.

Since Chinese and English belong to different language systems, and there is no requirement for subject predicate agreement in Chinese, it is relatively easy for Chinese English learners to ignore the requirement for subject predicate agreement. Chinese verbs are not affected by the person and number of the subject, but English predicate verbs should be consistent with the subject, and the predicate verb should change with the subject. When Chinese English learners mainly think in Chinese, they are often not used to considering whether the subject is the first person or the third person, either singular or plural. In this case, the third person singular is often misused, which leads to the occurrence of subject-predicate agreement errors.

Here, it can be seen that the Chinese English learners commit subject-predicate agreement errors in the following three ways. First, on the one hand, most frequently they neglected the rule of the subject of the third person singular, by mistaking the third person singular for the plural subject (to see sentences from eg.1 to eg. 10). Second, on the other hand, they overgeneralized this rule, by mistaking the plural subject for the third person singular (to see sentences from eg.11 to eg. 15). In addition, in eg. 16, they also overgeneralized the rule, by neglecting the subjunctive mood rule; and in eg.17, they did so by neglecting the present participle rule.

2.2. The instances with tn2 are as follows

eg.18: In the first impression is <tn2> (was) the military training, although the suffering of torture, but also in the past.

eg.19: That time, is I sprint <tn2> (sprinted) college entrance examination

eg.20: Finish in my don't finish <tn2> (didn't) before.

eg.21: I can experience the full value of the team spirit which is <tn2> (was) never before

eg.22: Secondly, I complete <tn2> (completed) military training last week.

eg.23: I have draw <tn2> (drawn) class, it's so happy.

eg.24: Since this autumn September, l came to Shanghai, the city l yearn <tn2> (have been yearning) for.

eg.25: We did <tn2> (do) a lot of training every day.

eg.26: In this regard, I realized <tn2> (realize) that teenagers like us should work harder in addition to a higher degree for the sake of the development of China.

The causes for tn2, wrong choice of tense with time adverbials may include: first. The students have vague basic concepts of various English tenses; second, they have inaccurate grasp of time category in English; third, it is due to the mother tongue (Chinese) interference. Because there is no change in the "tense" of verbs in Chinese, many students lack the concept of tense in their brains when expressing in English. In English, In English, a certain tense is usually connected with a certain adverbial of time. For instance, the present tense goes with the phrase "every day", while the present continuous tense is associated with "now". Similarly, the present perfect tense goes with "since".

Here, it can be seen in the sentences from eg.18 to eg. 22), the Chinese English learners neglected the connection between the tense and the adverbial of time, resulting in the wrong choice of tense with time adverbials. In English the past tense is usually connected with adverbial phrase like in the past, that time, before, last week, etc. From eg.23 to eg. 24, they neglected the present perfect tense rule where the adverbial since is often associated with it. From eg.25 to eg. 26, they overused the past tense by neglecting the present adverbial of every day or the future tense marker should.

2.3. The instances with tn3 are as follows

eg.27: I found that the university is <tn3> (was) not to provide for the aged.

eg.28: My father told me that I can <tn3> (could) write something which is interesting

eg.29: I received a gift that I will <tn3> (would) never forget

eg.30:…,i knew that campus life is <tn3> (was) very different from high school life.

eg.31: ….i found that the college life is <tn3> (was) happy and enjoyable.

eg.32: I hoped I can keep <tn3> (could) working hard to get ideal certificate and pass the top-up examination.

eg.33: I found that the school life is <tn3> (was) substantial and enjoyable.

eg.34: I heard that college life is <tn3> (was) rich and colorful,

eg.35: I look <tn3> (looked at) her hat and my mother saw what I hold <tn3> (held) the view that.

eg.36: My father rushed to console me and he cheer <tn3> (cheered) me on.

eg.37: The cake fell down off the desks and pull <tn3> (pulled) out to Zhangli'head, he just looked

like the father christmas.

eg.38: My school left a deep impression on me and I like <tn3> (liked) my campus so much.

eg.39: Today is my birthday, but I never forgot <tn3> (will never forget) it!

eg.40: As i expect <tn3> (expected), my college is beautiful.

eg.41: That was a nice morning, when i prepare <tn3> (was preparing) to make lunch,

eg.42: i am studying in mavlan university found <tn3> (finding) that school life is happy and enjoyable.

According to Wang (2007), one of the main causes for tn3 (tense agreement errors) is that Chinese English learners often confuse the concept of tense with that of time, believing that tense is time. Tense and time are indeed closely related, but the diversity of language and the richness of expressions keep them independent of each other. The same tense can represent things that happen at different times, and things that happen at the same time can also be represented by different tenses [18].

There are two features for the instances with tn3 above: For one thing, Chinese English learners often forget to use the past tense. Although there are elements in Chinese that indicate the past tense, these elements are not commonly used; therefore, Chinese students often try to substitute the present tense for the past tense. For another, Chinese English learners tend to forget to use the continuous tense. There is no progressive tense in Mandarin Chinese. Instead, the Chinese use the Chinese character "zai" to indicate a similar progressive state as in English.

From eg.27 to eg. 34, it is shown that Chinese English learners tended to forget to use the past tense in the object clause even if they used the past tense in the main clause. Besides, from eg.35 to eg. 38, they also forgot to use the past tense in the coordinate clause, and in eg.39 they misused the past tense. From eg.40 to eg. 41, in adverbial clauses, they often mistook the present tense for the past tense. In the end, in eg.42, the student misused the past tense by taking it for the present progressive tense.

2.4. Correlation between score and tense error

Table 1: Correlation between score and tense error

	score	tnl	tn2	tn3
score	1	-.095**	-0.006	-0.013
tnl	-.095**	1	-0.033	0.065
tn2	-0.006	-0.033	1	-0.023
tn3	-0.013	0.065	-0.023	1

** $P<0.01$

Table 1 reveals to us that among the three types of tense errors, only tn1, the subject-predicate agreement error is weakly correlated with score in a negative way. That is, the students at higher writing proficiency level commit fewer subject-predicate agreement errors than those at lower level. There exist no significant differences between the two groups in terms of tn2 or tn3, i.e. all the Chinese English learners in vocational college in the research have made similar performance in light of tense agreement and wrong choice of tense with time adverbials.

3. Conclusions

Through the above computer-aided analysis of tense errors in vocational college students' texts, some findings may be obtained as follows:

First, the most frequent tense error committed by the Chinese English learners is the subject-predicate agreement error, followed by the wrong choice of tense, and finally the tense agreement error.

Second, the Chinese English learners commit subject-predicate agreement errors in the following three ways. First, on the one hand, most frequently they neglect the rule of the subject of the third person singular, by mistaking the third person singular for the plural subject. Further, on the other hand, they overgeneralize this rule, by mistaking the plural subject for the third person singular. In addition, they also overgeneralize the rule, by neglecting the subjunctive mood rule, or by neglecting the present participle rule.

Third, the Chinese English learners neglect the connection between the tense and the adverbial of time, resulting in the wrong choice of tense with time adverbials. In English the past tense is usually

connected with adverbial phrase like in the past, that time, before, last week, etc. and the Chinese English learners neglect the present perfect tense rule where the adverbial since is often associated with it. They also overuse the past tense by neglecting the present adverbial of every day or the future tense marker should.

Fourth, Chinese English learners tend to forget to use the past tense in the object clause even if they used the past tense in the main clause. Besides, they also forget to use the past tense in the coordinate clause, or even misused the past tense. In adverbial clauses, they often mistake the present tense for the past tense. In the end, the student misuse the past tense by taking it for the present progressive tense.

Based on the above findings, some pedagogical implications may be drawn as follows:

First, to avoid the frequent occurences the subject-predicate agreement errors by Chinese English learners, the instructors may implant more knowledge on the concepts of various English tenses into the learners. Especially, they can arouse the learners' attention to the third person singular rule in present simple tense.

Second, the instructor may also help the learners to distinguish the concept of tense from that of time, by making a comparison of English grammar with Chinese grammar.

Finally, the instructor can enable the learners to focus more on the correct use of past tense, not to overuse it or misuse it. Anyhow, the learners' English language awarenesses are to be strengthened through their daily learning practice, by reading original material and speaking with the native English speakers, and so forth.

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