

The Effectiveness of a Corpus-based Instruction in Deepening EFL Learners' Knowledge of Periphrastic Causatives

Li-szu Agnes Huang

National Kaohsiung First University of Science and Technology, Taiwan

TESOL Journal
Vol. 6, pp. 83-108
©2012
<http://www.tesol-journal.com>



Abstract

This study investigated whether a corpus-based instruction could deepen EFL learners' knowledge of periphrastic causatives: *make*, *cause*, and *let*. The participants were 47 Taiwanese undergraduates from two intact classes. One class as the experimental group received a three-month corpus-based instruction; the other as the control group had no instruction on English causatives. A pre-test was first administered to measure participants' knowledge of periphrastic causatives. Following a data-driven model of illustration - interaction - induction, the researcher as instructor conducted the instruction and took notes on students' performance. After the instruction, a post-test was given to both groups whereas a questionnaire on learning effects and students' feelings for corpus-based activities was distributed to the experimental group. Three data sources were analyzed: pre- and post-tests, field notes, and questionnaires. The results indicated that the experimental group improved and outperformed the control group significantly in the post-test. The questionnaire results confirmed that the instruction was effective in increasing students' knowledge of the three causatives. However, the field notes revealed learners' difficulties in using certain causatives. To better distinguish these verbs' usages, learners should attend to semantic distinctions more than syntactic structures. Instructors also need to provide clear guidance on data search and data interpretation.

Keywords: corpus-based instruction, causatives, learner corpus

Introduction

Causation as a semantic primitive depicts an important cognitive process in the human mind (Goddard, 1998). Words for describing causation, hence, can be seen in almost all languages. In English, causative verbs as one of the seven major semantic domains are often found in academic prose (Biber, Johansson, Leech, Conrad, & Finegan, 1999).

Accordingly, it is necessary for EFL (English as a foreign language) writers to acquire causative verbs. Previous studies have revealed learners' tendency of favoring periphrastic causatives such as *make* and *cause* (Altenberg & Granger, 2001; Helms-Park, 2001; Juffs, 1996; Montrul, 2000). However, periphrastic causatives may create problems for EFL learners due to their subtle differences in semantics. Unaware of these differences, learners tended to produce awkward or erroneous expressions with these causatives in their writing.

In view of learners' possible difficulty in using periphrastic causatives, this study investigated whether a corpus-based instruction would deepen Chinese EFL learners' existing knowledge of periphrastic causatives *make*, *cause*, and *let*. The corpus-based instruction incorporated the errors identified in a self-compiled learner corpus and examples from native-speaker corpora into the instructional materials. By identifying learners' common problems in producing English periphrastic causatives, the researcher as instructor provided timely instructional intervention to help learners distinguish the usages of the three causatives. It is hoped that such a corpus-based instruction will not only improve learners' knowledge of periphrastic causatives but also help them find an effective way to tackle L2 near-synonyms.

Periphrastic Causatives in English

Goddard (1998) divides English causative verbs into three major types: lexical, morphological, and periphrastic (or analytic) causatives. Lexical causatives are words that contain the meaning of causation in their lexical meaning, for example, *kill* with an embedded meaning of causing someone to *die*. Morphological causatives refer to verbs with a suffix *-en* or *-ify* (e.g., *widen*, *nullify*) that carries the meaning of causation. Periphrastic causatives such as *make*, *have*, and *get* have their own meaning as a main verb but are used as causatives when they involve two clauses as in *I made/had John leave*.

Normally, lexical and morphological causatives have one argument with clearly specified agent and patient/theme. For example, in *I killed John*, an agent *I* did an action (e.g., *kill*) and directly resulted in the death of a patient *John* (Goddard, 1998). In contrast, periphrastic causatives have one argument with a main verb encoding the notion of cause and a second argument with a complement verb describing a result (Hamawand, 2005; Wolff, 2003). In *I made John leave*, the agent (or causer) *I* acted force on the patient *John* and resulted in an effect that is manifested in a verb complement with a subject, or causee, (e.g., *John*) and a verb (e.g., *leave*). Such a structure seems less straightforward because language users have to choose a causer that is able to exercise force or influence on the

causee and check whether the causee and the complement verb match in semantics. They also need to clarify the relationship between the main verb and the complement verb, making sure that the result can be brought about by the main verb, i.e., the periphrastic causative.

Although the number of periphrastic causatives seems limited, they are not always interchangeable syntactically or semantically. Wolff (2003, p. 42) distinguishes three types of periphrastic causatives: CAUSE-type (e. g., *cause, make, get*), PREVENT-type (e.g., *prevent, hinder, keep*), and ENABLE-type (e. g., *let, enable, help*). According to Wolff, the CAUSE-type verbs “entail or strongly imply the occurrence of a result” (p. 43) whereas the PREVENT-type verbs entail non-occurrence of a result. On the other hand, the ENABLE-type verbs strongly imply but do not necessarily entail the occurrence of a result. For example, in *I let John leave*, the agent *I* intends to cause the result (i. e., *John leave*), but the result may or may occur (e. g., *I let John leave, but he didn’t leave.*). Wolff also adopts the force dynamic model to compare the CAUSE-type and ENABLE-type verbs. In the sentence *The blast caused the boat to heel*, the tendency of the patient (i.e., *the boat*) is against the result (i.e., *to heel*), so opposition exists between the causer (i.e., *the blast*) and the causee (i. e., *the boat*) (p. 9). By contrast, in the sentence *Vitamin B enables the body to digest food*, the tendency of the patient (i. e., *the body*) is in accordance with the result (i.e., *to digest food*) with no opposition between the causer (i. e., *Vitamin B*) and the causee (i.e., *the body*) (p. 9). As shown above, *make, cause, and let* exhibit subtle differences in meaning because they belong to different types of periphrastic causatives.

Studies on Causatives *Make, Cause, and Let*

Make as a highly polysemous verb has a wider range of use as a periphrastic causative than *cause* and *let*. Gilquin (2006) analyzed over 3000 constructions of periphrastic causatives *make, cause, get, and have* in the BNC. In terms of *make*, it was found that the most frequent pattern was the combination of an inanimate causer, an animate causee, and a non-volitional effect expressed by a complement verb of psychological state, for example, *Er I, I was going in the evening you know, doing the tailoring class but of course my <pause> illnesses have stopped me doing all of that and made me realize I can’t do it all* (Gilquin, 2006, p. 175). Contrary to common expectation, only 18% of *make* constructions involved a combination of an animate causer, an animate causee, and a volitional effect.

Gilquin’s (2006) results with *cause*, however, revealed a different pattern with *make* although both belong to the CAUSE-type verbs. *Cause* was rarely used with the combination of a human causer and a human causee. Rather, the majority of the *cause*

constructions involved an inanimate causer, for example, *The importance and complexity of financial matters have caused special procedures to be evolved to deal with them* (Gilquin, 2006, p. 174). In terms of *let*, Huang and Su (2009) found that the causative constructions of *let* in the BNC tended to favor an animate causer whereas the causee could be animate or inanimate although an animate causee occupied a higher proportion of data, for example, *If you are ill and cannot go to work, you must let your manager know as soon as possible*. The subtle differences in the usage of *make*, *cause*, and *let*, though explicit to native speakers, may appear puzzling for those who learn English as a second language (L2).

Indeed, numerous studies have revealed the challenge in producing periphrastic causatives for L2 learners of English. In Altenberg and Granger (2001), both French and Swedish learners of English created deviant uses of causative *make* as compared with a native speaker corpus. The Swedish learners favored *make* followed by a verb complement but sometimes created peculiar expressions (e.g., **make the air polluted*, p. 182) that should do without *make* (i.e., *pollute the air*). While they also tended to overuse *make* followed by an adjective complement, the French group seemed to under-use such a construction. However, both groups of learners preferred *make* constructions to lexical causatives possibly under the influence of their L1. Such a tendency was also found in Turkish (Montrul, 2000) and Vietnamese (Helms-Park, 2001) learners of English. It seems that no matter whether there exist periphrastic causatives in learners' L1 or not, learners often use *make* as a convenient way to express causation.

Learners' favor of periphrastic causatives over lexical causatives has also been evidenced in Chinese EFL learners. Huang and Su (2007) found that Chinese EFL learners not only overused causative *make* but also created an impressive number of interlanguage variants. Other than the awkward handling of *make* that could be replaced with another causative verb, some variants stemmed from the mismatch between the subject and the verb in the verb complement (e.g., *This attitude brings me much pressure and *makes my emotions losing control*). Others exhibited an inappropriate complement verb (e.g., *The food you have will transfer into energy in your body and *make you be like reborn*). Learners' deviant use could also be attributed to the influence of the Chinese causative *ràng*, which has a wider meaning range than English *let* or *make*. Thinking of *ràng* when producing English causatives, learners seemed to treat *let* and *make* as synonymous and used them interchangeably. In a further investigation into Chinese EFL learners' lexical variants in formal and informal texts, Huang (2008) found that the greatest percentage of variants occurred in the category of L2 near-synonyms. Learners were confused with pairs of synonymous lexical items or a group of words with similar meanings,

particularly periphrastic causatives such as *make*, *cause*, and *let*. To help learners distinguish the different uses of periphrastic causatives, teachers could resort to language corpora for illustrating native-speaker usage of these verbs.

The Use of Language Corpora in L2 Learning and Teaching

The emergence of large corpora has made many aspects of corpus study possible and thus has provided a lot of resources for learning a second language. Language corpora not only demonstrate the typical and frequent use of an individual word or phrase (Gabel, 2001; Hunston, 2002; Stubbs, 2001) but also allow the comparison of near-synonyms (Adolphs, 2006; McEnery, Xiao, & Tono, 2006). Examining corpus examples of seven synonymous verbs expressing “shaking,” Atkins and Levin (1995) found that despite their semantic similarities, the seven verbs exhibit real differences in the syntactic behavior of transitivity as shown in their overlapping but not identical collocates.

Because corpus data display a word’s usage in authentic, meaningful contexts, language corpora can facilitate L2 learners’ vocabulary learning. As emphasized by Altenberg and Granger (2001, p. 190), “Concordance-based exercises extracted from native corpora are a useful resource for raising advanced learners’ awareness of the structural and collocational complexity of high-frequency verbs.” Particularly for near-synonyms whose subtle differences cannot be discerned as in the case of periphrastic causatives, corpus data allow learners to examine their collocational patterns in a variety of contexts, contrast their syntactic behavior, and thus induce their subtle semantic differences (Cobb, 2003; Martin, 1984). In view of these advantages and learners’ possible difficulties in producing the three periphrastic causatives *make*, *cause* and *let*, this study explored the feasibility of a corpus-based instruction in deepening Chinese EFL learners’ knowledge of these verbs.

The corpus-based instruction in this study followed a “three Is” model, i.e., illustration - interaction - induction, originally proposed by Carter and McCarthy (1995) and elaborated by McEnery et al. (2006). In contrast to the traditional approach of “presentation - practice - production,” in which learners play a passive role, the “three Is” model places learners in the center of a corpus-based instruction whereas teachers facilitate students’ learning. In this model, students first look at real data from language corpora (i.e., illustration) and search the linguistic form they aim for. Then they engage in “interaction” by sharing each other’s opinions and observations. Through interactive discussions, learners reshape their presumptions and study the data from a different perspective. If necessary, they may initiate more searches for corpus data to verify their hypothesis. At the last stage, learners are encouraged to induce their own rules for the target linguistic feature

(i.e., induction) (McEnery et al., 2006). Such a model matches a deep approach to learning in which learners monitor and regulate the development of their understanding of a learning task (Magno, 2009). At the first two stages, teachers have to help learners formulate the enquiry and create a cooperative environment for learners' active interaction and sharing of discoveries. At the stage of induction, teachers as a facilitator check the rules induced by learners and provide timely advice on ways to refine the rules.

With the above model as the skeleton in this study, the researcher examined the effectiveness of a corpus-based instruction by posing three research questions:

- (a) How does the experimental group that receives the instruction improve their knowledge of periphrastic causatives after the instruction as opposed to the control group?
- (b) What are the experimental group's opinions about the administration of the corpus-based instruction?
- (c) How does the experimental group perform on class tasks and assignments during the instruction as shown in the instructor's field notes? Do students encounter any difficulties in reshaping their knowledge of periphrastic causatives?

Method

Research Design

Prior to the corpus-based instruction, the researcher administered a self-designed "Test on Causative Verbs" as a pre-test to an experimental group who received the instruction and a control group who did not. The instruction, lasting three months, incorporated native-speaker corpora and common errors of *make*, *cause*, and *let* found in a self-compiled learner corpus as course materials. During the instruction, the researcher as instructor took notes on students' performance in class tasks and assignments. After the completion of the instruction, the researcher administered the aforementioned test as a post-test to the two groups. Additionally, a questionnaire was given to the experimental group for surveying students' opinions about the corpus-based instruction.

Participants and Research Context

This study was carried out at a university of science and technology in Taiwan. The participants were 47 English-major juniors, all Chinese EFL learners, from two intact

classes. Having been screened through a joint entrance exam, these students were admitted to the English department with a similar proficiency level in English and randomly assigned to two different classes. All of them had learned English for six years in high school and another two and a half years at the university when the study was conducted. Even though students may have taken different elective courses at the university, the two classes had received similar training in English from the same required courses offered by the department. Hence, their English proficiency was considered to be at a similar level.

These participants were selected based on purposive and convenience sampling. Because the study focused on the use of periphrastic causatives in learners' written output, the students who were learning English academic writing were the best candidates. As the two classes had to remain intact for practical reasons, one class served as the experimental group (2 males and 24 females) whereas the other was treated as the control group (2 males and 19 females). Without random sampling, this study employed a quasi-experimental design that is common in classroom research. Not conducting the experiment in a lab where all extraneous factors could be strictly controlled, the researcher was aware of the limited generalizability of the results, a limitation that is difficult, if not impossible, to avoid in classroom research.

This research was conducted when the participants were taking a required Advanced English Writing course at the second semester of their junior year. The experimental group was taught by the researcher whereas the control group was taught by another instructor. During the semester when the study was carried out, the two groups of students practiced essays on similar rhetorical styles such as comparison and contrast, cause and effect as well as argumentation. For the experimental group, the corpus-based instruction was incorporated into the regular course schedule for the whole semester. The control group, by contrast, did not receive explicit instruction on the use of causative verbs.

Instruments and Data Sources

The research data came from three major sources: (a) the two groups' results in the pre- and post-tests on their knowledge of causative verbs, (b) the experimental group's responses to a questionnaire on the effectiveness of the corpus-based instruction, and (c) the instructor's field notes.

The first research instrument, a self-designed "Test on Causative Verbs," aimed to measure quantitatively learners' knowledge of causative verbs *make*, *cause*, and *let*. The test consists of 40 items that require the testees to judge the accuracy of an underlined causative expression in a sentential context and provide a better word or phrase if the expression is

incorrect (refer to the Appendix). All the test items, 30 erroneous ones and 10 correct ones, were retrieved from a self-compiled learner corpus. The corpus consists of approximately 900 writing essays produced by previous English-major students at the same department where the current participants studied. These essays cover all the rhetorical styles that were also practiced by the participants during their junior year. Such a close match in learner profile enables a truthful description of learners' problematic production of the three periphrastic causatives. For the sake of clarity in test items, the examples extracted from the corpus were slightly revised. The researcher also consulted native speakers to ensure the appropriateness of test items. It should be noted that the test and the corpus-based instruction used the same learner corpus as resources for their design. Hence, the aspects of knowledge measured in the test corresponded well with those covered in the instruction so that students' possible gains in the test scores could be attributed to the success of the instruction. In other words, what was tested represented the problems students often encountered; these problems were further addressed in the instruction.

The second instrument was a questionnaire for surveying students' opinions about the corpus-based instruction. The questionnaire, written in Chinese, is composed of three parts: overall learning effects, teaching activities, and corpora use. The first part targets at students' prior knowledge of causative verbs and their perceived improvement after the corpus-based instruction. It consists of one open-ended question and 6 questions with a 4-point Likert scale for students to indicate their degree of agreement to each statement (1: totally disagree, 2: disagree, 3: agree, 4: totally agree). The second part of the questionnaire asks whether the corpus-based class activities were helpful in broadening and deepening their knowledge of causative verbs. It contains 2 open-ended questions and 6 questions with a 4-point Likert scale. The last part surveys student-perceived advantages and disadvantages of language corpora, aiming to reveal students' feelings about corpus use in their learning of the target causatives. In a multiple-choice format, one question focuses on advantages and the other on disadvantages. Under each question are 6 choices and one blank line for students to specify other answers.

The last data source came from the course instructor's field notes on the procession of corpus-based activities, the participants' reaction in class, and their performance on class tasks and assignments. These field notes were analyzed to pinpoint the instructor's obstacles encountered during the instruction as well as the participants' progress and struggle in refining their knowledge of the three periphrastic causatives.

The Corpus-Based Instruction

Based on the principles of the three Is model (McEnery et al., 2006), the researcher as instructor incorporated data from the self-compiled learner corpus and examples from native-speaker corpora into the three-month instruction. The procedure basically followed the pattern of asking students to correct erroneous uses retrieved from the learner corpus, engaging students in discussing erroneous cases and discovering native-speaker use from corpora, and pushing students to induce rules of usage of the target causatives. Todd (2001) followed a similar procedure to test whether Thai learners of English could induce grammatical and lexical rules from concordances and self-correct their errors marked by the teacher. The results confirmed learners' ability to induce valid lexico-grammatical patterns from concordances and engage successfully in correcting their own errors. O'Sullivan and Chambers' (2006) study on English learners of French also concluded the usefulness of corpus consultation in helping learners correct grammatical, lexical, as well as syntactic errors. These studies have provided a strong support for the researcher to use the approach of error correction through the use of corpus data.

In addition to the aforementioned activities, class tasks and assignments related to the content of the instruction were regularly given. Although not all of them were error corrections in nature, they all aimed to build up students' knowledge of English periphrastic causatives, the major goal of the instructional intervention. Illustrated here are three key activities.

Students' performance on the practice before Week 8 revealed that many of learners' awkward expressions stemmed from the influence of Chinese causatives *shǐ* and *ràng*. Hence, in Week 8, the instructor asked the students, working in groups, to search a Chinese-English translation corpus and identify various English verbs or phrases for *shǐ* and *ràng*. In this activity, students looked at the real data (illustration), discussed with peers (interaction), and induced on their own the English causative expressions that denote *shǐ* or *ràng* (induction). Later, the instructor provided individual consultation to help each group evaluate their results.

Based on students' performance on Week 8 tasks and assignments, the instructor found that students' heavy reliance on periphrastic causatives resulted from a lack of knowledge of other alternative causatives. To expand such knowledge, the first task in Week 12 required the students to sort 16 causatives (i.e., *let, allow, help, leave, enable, cause, make, get, force, prevent, block, hinder, impede, keep, protect, save* from Wolff &

Song, 2003, pp. 322-328) presented in sentential contexts into different categories and induce the syntactic pattern of each verb. The instructor then introduced the three types of periphrastic causatives, namely the ENABLE-type, CAUSE-type, and PREVENT-type. The other two class tasks required students to work individually or in groups to use the above causative verbs in an appropriate context. To consolidate the knowledge, the instructor gave an assignment that required each student to find 50 example sentences for an assigned causative verb from English native-speaker corpora and induce the verb's syntactic and semantic rules of usage.

To wrap up the corpus-based instruction, the instructor conducted in Week 16 a class activity that asked students to summarize the different uses of *make*, *cause*, and *let*. The students discussed with their partner to induce the differences between two juxtaposed sets of data from the BNC and the self-compiled learner corpus. The data contained sentences involving causatives *make*, *cause*, and *let* with the causer and causee highlighted. After students completed their work, the instructor showed the whole class a list of rules for *make*, *cause*, and *let* and explained their differences.

Data Collection and Data Analysis

In the fourth week of the semester, the "Test on Causative Verbs" was administered to the two groups of students as a pre-test for detecting students' baseline knowledge. The same test was given in Week 16 as a post-test to measure any progress. Each group took the test in their own classroom and finished the test within 35 minutes. During the period of instruction, the instructor constantly took notes and evaluated the experimental group's performance. The questionnaire was given in Week 17 to the experimental group, who took approximately 8 minutes to complete it.

The Test on Causative Verbs required the testees to judge the accuracy of causative usage and provide a correct causative expression for any wrong usage. Hence, the scoring of each item was done by assigning separate scores to judgment and provision of a correct answer. A correct judgment was assigned 1 point whereas 0 point is assigned to any wrong judgment. So the perfect score for judgment is 40. For each item with an inaccurate causative expression, an answer that fits the context of a test item well in both semantics and syntax was assigned 2 points. An answer that is partially correct in syntax and marginally acceptable in semantics is assigned 1 point. An answer that is wrong in syntax and unacceptable in semantics is assigned 0 point. The researcher did all the scoring and consulted another researcher when encountering ambiguous answers. Because there are 30 erroneous items in the test, the perfect score for the provision of correct answers is 60. So

the total perfect score for the test is 100. Once each participant's scores for the pre- and post-tests were obtained, the performance of the control and experimental groups was compared through a two-way ANOVA for a mixed design. The within-group independent variable is time (pre-test vs. post-test) whereas the between-group independent variable is group (control vs. experimental groups). The dependent variable is test scores.

The analysis of the questionnaire started with counting the frequency of participants who circled each number for each item with a 4-point Likert scale. Here, the Likert scale for the participants to indicate degree of agreement was considered an ordinal scale because the intervals between points on the scale are not necessarily of equal value (Argyrous, 2005; Hatch & Lazaraton, 1991). With such a limitation, the scale cannot be treated as an interval scale and thus, only frequency of each category (i.e., totally disagree, disagree, agree, totally agree) was counted. For each open-ended question, all answers were recorded and similar answers combined. For the multiple-choice questions, the number of participants who selected each choice for each item was calculated. The analysis of the instructor's field notes focused on students' performance on class tasks and assignments as well as their difficulties in completing the class activities. The purpose was to compensate the analyses of other data sources and provide a clearer picture on the effectiveness of the corpus-based instruction.

Results

Results of the Test on Causative Verbs

The results of descriptive statistics for the pre- and post-tests are presented in Table 1. In the pre-test, the control group has a slightly higher mean score than the experimental group while the experimental group's standard deviation is higher. In the post-test, the experimental group scored much higher in both mean and standard deviation. The control group seemed to perform steadily in the two tests as their means were very close. By contrast, the experimental group improved a lot in the post-test despite a wider individual variation.

Table 1

Results of Descriptive Statistics in the Pre- and Post-tests

	Pre-test		Post-test	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Control (N = 21)	35.62	5.82	35.19	5.64
Experimental (N = 26)	33.54	6.81	42.38	9.54

Note. SD means “standard deviation.”

The experimental group’s better performance in the post-test is evidenced in the ANOVA results in Table 2. The upper panel shows a significant main effect of the variable “time” and a significant interaction effect but an insignificant main effect of “group.” In order to discover the interaction between the two variables, the main effect of “time” was compared between the two groups. As displayed in the lower panel, the between-group statistics is not significant in the pre-test, indicating the two groups’ equivalent baseline knowledge. But after the instruction, the two groups performed differently in the post-test with the experimental group scoring significantly higher than the control group (refer to Figure 1). These results clearly suggested the usefulness of the corpus-based instruction in improving the experimental group’s knowledge of periphrastic causatives.

Table 2

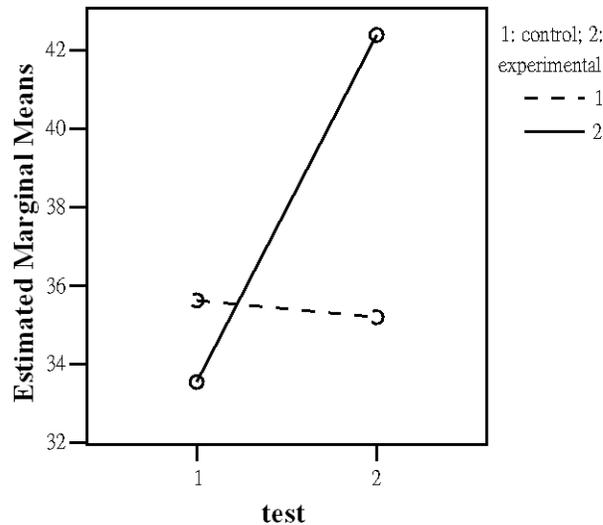
Results of Two-way ANOVA

Overall ANOVA Results					
Source	SS	df	MS	<i>F</i>	<i>p</i>
Time	411.566	1	411.566	13.506	.001**
Group	151.883	1	151.883	2.024	.162
Time × Group	499.651	1	499.651	16.397	< .001***
within-group error	3377.542	45	75.056		
error (Time)	1371.364	45	30.473		
Total		93			
Main Effect of “Time”					
Source	SS	df	MS	<i>F</i>	<i>p</i>
<u>Pre-test</u>					
between-group	50.288	1	50.288	1.232	.273
within-group	1837.414	45	40.831		
Total	1887.702	46			
<u>Post-test</u>					
between-group	601.246	1	601.246	9.293	.004**
within-group	2911.392	45	64.698		
Total	3512.638	46			

Note. ** $p < .01$; *** $p < .001$

Figure 1

Plot of the Two Groups' Mean Differences in Pre- and Post-tests



Note. The number “1” on the X-axis represents the pre-test and “2” represents the post-test. The solid line depicts the performance of the experimental group while the dotted line shows the control group’s performance.

Questionnaire Results

Table 3 displays the results of the first part of the questionnaire: overall learning effects. The number in each cell represents the frequency of students who chose each option. Items 1, 3, and 4 are related to students’ prior knowledge of causatives. The results indicated that more than two-thirds of students were unclear about the usage of *make*, *cause*, and *let* and other causative verbs before the instruction. By contrast, such knowledge increased after the instruction as indicated in items 2 and 5. Most students also agreed that learning the usage of causative verbs was useful for improving their English writing ability (refer to item 6). These findings suggested that students generally held a positive attitude towards the instruction, which helped them clarify the usage of the three periphrastic causatives and expanded their knowledge of alternative causative verbs. However, a few students still found *make* and *let* puzzling whereas *cause* seemed easier to handle (refer to item 7).

Table 3

Results of the First Part of the Questionnaire: Overall Learning Effects (N = 26)

Item	<u>Totally disagree</u>	<u>Disagree</u>	<u>Agree</u>	<u>Totally agree</u>	Total frequency
1. unclear about the differences/similarities among <i>make</i> , <i>cause</i> , <i>let</i> before the instruction	0	7	14	5	26
2. able to distinguish the usage of <i>make</i> , <i>cause</i> , <i>let</i> after the instruction	0	7	19	0	26
3. unaware of other causative verbs such as <i>enable</i> , <i>get</i> , <i>leave</i> before the instruction	1	7	16	2	26
4. unclear about the usage of other causative verbs before the instruction	0	3	18	5	26
5. clearer about the usage of other causative verbs after the instruction	0	1	23	2	26
6. Knowledge of causative verbs is helpful for English writing.	0	0	14	9	23*
7. still unclear about the usage of causative verbs such as:	<i>let</i> (3), <i>make</i> (3), <i>leave</i> (3), <i>get</i> (2), <i>cause</i> (1), <i>enable</i> (1)				

Note. *Three students did not respond to this item, so the total frequency is 23.

The number in the parentheses for Item 7 indicates the number of students who wrote down the word. Please note that a couple of students wrote down more than one word whereas some did not provide any answer.

Table 4 presents the results concerning the effectiveness of the corpus-based class activities. Except for nearly one-third of students with a negative attitude toward “group discussion in error correction” and “individual assignments” (items 2 and 3), most participants considered the class activities helpful (items 1 to 5). Particularly helpful were the teacher’s explanation and illustration. Many students also favored the use of translation and native-speaker corpora as well as “discovery” learning of inducing the usage of causative verbs. Hence, the majority of them expressed willingness to use corpora to learn the usage of English words in the future (refer to item 6). Even though some students disfavored self-induction of verb usage and group discussion, the participants generally

agreed on the effectiveness of the corpus-based activities in broadening and deepening their knowledge of causative verbs.

Table 4

Results of the Second Part of the Questionnaire: Teaching Activities (N = 26)

Class activity	<u>Totally</u> <u>disagree</u>	<u>Disagree</u>	<u>Agree</u>	<u>Totally</u> <u>agree</u>	Total frequency
1. teacher's explanation and illustration	0	0	21	5	26
2. group discussion in error correction	1	7	16	2	26
3. individual assignments	0	7	19	0	26
4. use of Chinese-English translation corpus	0	5	19	2	26
5. induction of usage of causatives through the use of English native-speaker corpora	0	4	20	2	26
6. will use corpora to learn other vocabulary	0	3	21	2	26
7. the most effective activity in this semester:	induction of usage (4), combination of group discussion and other activities (4), teacher's explanation (1), group discussion (1), individual assignment (1), use of translation corpus (1)				
8. the least effective activity in this semester:	induction of usage (4), group discussion (3), teacher's explanation (1), quiz (1)				

Note. The number in the parentheses for Items 7 and 8 indicates the number of students who provided similar answers.

Table 5 summarizes the results of students' perception of the advantages and disadvantages of language corpora. As shown in the first panel, more than 80% of students pointed out the advantages of corpora in exhibiting numerous example sentences and allowing them to find collocations. Nearly 70% of students acknowledged the usefulness of corpora in illustrating native speakers' authentic data and the usage of near-synonyms. However, only about 40% of students considered the use of corpora beneficial in inducing the usage of words or finding translation equivalents. In terms of the disadvantages of corpora, the participants were least satisfied with the unstable condition of on-line concordancers. In addition, the limited sentential context in concordancers (61.54%) and a large quantity of concordance lines (53.85%) seemed to affect their judgment of the correctness of corpora sentences as more than 70% of students reported such a disadvantage. The results suggested that some students still felt unconfident in the use of corpora and probably need more hands-on practice before they can make full use of language corpora.

Overall, the questionnaire results revealed the corpus-based instruction as effective in helping students understand the usage of causative verbs. Most participants in the experimental group benefited from the class activities despite a few students remaining puzzled about the usage of specific periphrastic causatives.

Table 5

Results of the Third Part of the Questionnaire: Corpora Use (N = 26)

Advantages: Corpora allow me to...	Frequency	Percentage
induce usage of words on my own	11	42.31
compare usage of near-synonyms	18	69.23
get native speakers' authentic data	18	69.23
read many example sentences	22	84.62
find collocations	22	84.62
find English equivalents for Chinese expressions	10	38.46
Others: I will continue using these corpora.		
Disadvantages: Corpora are hard to use due to	Frequency	Percentage
incomplete sentences	8	30.77
difficulty in understanding sentence meanings with limited context	16	61.54
unstable condition of on-line concordancers	22	84.62
inability to judge the correctness of corpora sentences	19	73.08
difficulty in inducing a word's usage from many concordance lines	14	53.85
complicated command for searching target words	5	19.23
Others: 1. unable to use Chinese as target words		
2. unorganized information in concordance lines		
3. unable to search a target word without knowing its meaning		

Note. The percentage was obtained by having the frequency divided by 26, i.e., the total number of participants.

Results of the Instructor's Field Notes

The field note results center on students' performance on class tasks and assignments, supplemented with the instructor's observation. First, the instructor's evaluation of the practice before Week 8 revealed students' insensitivity of the erroneous use of the three causatives. In Week 8, the instructor observed students' difficulty in identifying the English causative expressions for Chinese *shǐ* or *ràng* and in revising expressions of *make*, *cause*, and *let* with intense awkwardness. In view of a close relationship between such difficulty and students' insufficient knowledge of other causative verbs, the instructor administered a

sorting task in Week 12, aiming to expand students' knowledge of alternative causatives. The results revealed students' tendency of categorizing the causative verbs solely based on the similarities in syntactic patterns. Moreover, some students seemed unclear about the differences between the ENABLE- and CAUSE-types of verbs. It was suspected that students' confusion occurred because they paid overdue attention to syntactic structures without noticing those verbs' semantic differences.

In Week 16, the instructor observed that whereas a few students had expanded their knowledge of causative verbs with the help of instruction, some were still unable to distinguish the usage of the verbs. These students may be undergoing the restructuring of old knowledge but have not constructed their new knowledge. The evaluation of students' performance on the wrapping-up task, again, revealed their tendency of focusing on the syntactic structures rather than semantic differences, an outcome likely resulting from their level of English proficiency. As indicated by Montrul (2000, p. 264), "Lower level learners learn semantically based alternations through syntax, whereas higher level learners display a higher degree of semantic and syntactic differentiation." The current participants, inexperienced in distinguishing near-synonyms, naturally attended to structural differences. With the advancement in target language proficiency, they should be better at discriminating word usage semantically.

To conclude, it was found that with increasing exposure to more causatives, the students became more puzzled about the usage of causatives. For each causative verb introduced by the instructor, the students paid more attention to its syntactic rules than semantic distinctions with other synonyms. Although they were given ample opportunities to use on-line concordancers and engage in group discussions, they sometimes felt lost in their "discovery learning" and hence did not always perform satisfactorily. Echoing the results of the questionnaire, the students still needed a lot of guidance from the instructor not only on the search of information from concordancers but also on the induction of word usage. In terms of the three periphrastic causatives, *make* has the most complicated syntactic patterns and seemed most difficult for students to find clear-cut rules. On the other hand, *cause* seemed to induce least difficulty whereas the usage of *let* still created confusion despite its simplistic syntactic patterns.

Discussion

This study investigated the effectiveness of a corpus-based instruction in deepening Chinese EFL learners' knowledge of periphrastic causatives *make*, *cause*, and *let*. The results of a self-designed Test on Causative Verbs indicated that the experimental group

performed significantly better than the control group in the post-test after the instruction and also achieved a significant higher mean score in the post-test than in the pre-test. This outcome converged with the questionnaire results in confirming the effectiveness of the instruction in increasing students' knowledge of the three target verbs. While students generally held a positive attitude toward the corpus-based class activities and the use of language corpora, a few students remained confused about the usage of certain periphrastic causatives, a phenomenon observed in the instructor's field notes. Students' unsatisfactory performance on class tasks and assignments highlighted their need for clear guidance from the instructor on data search and data interpretation.

The success of the corpus-based instruction could be attributed to a pattern that combines teachers' explicit instruction and students' discovery learning through corpora use. The instructional intervention was revealed to be effective not only in restructuring learners' original knowledge of high-frequency verbs they commonly misused but also in expanding their knowledge of other alternative expressions. In sharp contrast with the control group who remained unaware of their inappropriate usage even when they matured after one semester, the experimental group became more aware of the correct usage of the three periphrastic causatives and gained more knowledge of English periphrastic causatives in general. Such knowledge gains are valuable and can hardly be obtained through incidental learning, a time-consuming process with no guarantee of outcome.

The success of the corpus-based instruction also highlighted the benefit of error correction on raising students' awareness and engaging them in inducing correct patterns. As suggested by Todd (2001), learners' ability to induce patterns of word usage from concordances was strongly correlated with their ability to self-correct errors. Previous studies have also shown the value of students' self-correction in increasing the accuracy of grammatical and lexical forms in their L2 writing (Chandler, 2003; Ellis, Sheen, Murakami, & Takashima, 2008; Sheen, Wright, & Moldawa, 2009). The results generally confirmed the positive effects of teachers' error feedback and students' self-correction practices on improved accuracy and fluency in L2 writing. Some students were even able to carry on these positive effects to their subsequent writing. Error correction, apparently, works well to highlight learners' weak areas, focus learners' attention to certain patterns, and enable them to directly correct the wrong usage. In this study, the researcher had organized all common errors into patterns before conducting the activities of error correction. This was made possible through a learner corpus whose profile closely resembled the current participants' past learning experiences. Such a systematic way of providing error feedback enabled learners to deal with all possible errors they may make at one time and thus, appears to be a more efficient way of applying error correction.

The corpus-based instruction in this study required students to access native-speaker data through concordance programs, an approach perceived by most students as beneficial in learning vocabulary. Indeed, concordancers provide L2 learners with much more exposure to a target language word than incidental learning of vocabulary (Cobb, 1997). Also applied in the instruction were bilingual corpora which helped learners notice the lack of one-to-one translation equivalents and multiple possibilities of L2 expressions in different contexts. As shown in previous studies on Chinese learners of English, the use of bilingual concordancer allows learners to know word usages in different contexts and self-correct their own errors in essays (Wang, 2001; Yu & Yeh, 2004). The above practices demonstrated in this study are beneficial for future instructors who want to adopt a corpus-based instruction.

Under the circumstances when appropriate corpora are unavailable, teachers could create their own sub-corpus or collect data from large corpora and organize them into teaching materials for their own teaching purposes. Aston (1997) gave useful suggestions for designing a corpus-based instruction such as modifying texts to simplify the data for beginners, selecting data from familiar genres, reducing the quantity of data, and simplifying the tasks (pp. 62-63). Such a teacher-oriented learning may be more beneficial for beginning and intermediate learners (Aston, 1997; Gavioli, 1997) even though learner-oriented discovery learning is generally favored. Once learners have progressed in their metalinguistic skills and have accumulated experiences in corpora use, they can be granted more freedom and autonomy in searching data for their linguistic queries.

The idea of discovery learning proposed in the “three Is” model (McEnery et al., 2006) is very appealing at the first sight as it emphasizes data search initiated by learners for fulfilling their own needs and aims to cultivate learners into a “linguistic researcher” (Johns, 1997). Though ideally it is learner-directed learning, the reality was not so rosy. As indicated in the questionnaire and field notes, the EFL learners in this study still favored teacher guidance on data search and data interpretation, either of which could hardly be achieved through interaction with other learners. As cautioned by Gavioli (1997), simply asking students to access corpus data does not make them linguistic researchers because categorization and interpretation of corpus data draw on learners’ linguistic as well as metalinguistic skills. Without clear teacher guidance, learners are left alone fumbling for the best way to organize their findings, which certainly requires a lengthy process of trial and error.

Educational Implications and Conclusion

The results of this study have useful educational implications. First, the self-compiled learner corpus, though homogeneous in the data profile, provided authentic examples of errors commonly created by learners and allowed the instructor to design instructional materials to raise students' awareness of error patterns. Such a self-compiled learner corpus will save teachers' time in finding raw materials for their corpus-based instruction. The compilation of a learner corpus starts with collecting students' written or oral work each year while teachers are teaching related courses. These data are of great value because they exhibit interlanguage features that show learners' progress as well as struggle toward the mastery of a second language.

The success of the corpus-based instruction in this study has also highlighted the usefulness of native-speaker corpora and parallel bilingual corpora in language learning. Parallel corpora with translation data are helpful in displaying various translation equivalents for L2 vocabulary or expression (Hunston, 2002; Leech, 1997). Through the examination of all possible translation equivalents, learners would become aware that one-on-one correspondents between two languages are not always applicable; rather, more than one target language expressions are possible yet each of them is suitable for a different context. Such awareness is very important if learners aim for clear distinctions of L2 near-synonyms.

This study demonstrated the effectiveness of a corpus-based instruction in increasing students' knowledge of three periphrastic causatives. The error patterns induced from a learner corpus helped the instructor design teaching materials and worked to challenge learners' presumption of these words' usage. Once aware of their inadequate prior knowledge, learners were able to correct their erroneous use of these words and absorb new knowledge of other causatives. As the use of corpora in learning near-synonyms was found promising in this study, researchers are encouraged to seek more effective ways to apply language corpora to L2 learning.

References

- Adolphs, S. (2006). *Introducing electronic text analysis: A practical guide for language and literacy studies*. New York: Routledge.
- Altenberg, B., & Granger, S. (2001). The grammatical and lexical patterning of MAKE in native and non-native student writing. *Applied Linguistics*, 22, 173-194.

- Argyrous, G. (2005). *Statistics for research: With a guide to SPSS*. London: SAGE publications.
- Aston, G. (1997). Enriching the learning environment: Corpora in ELT. In A. Wichmann, S. Fligelstone, T. McEnery, & G. Knowles (Eds.), *Teaching and language corpora* (pp. 51-64). Essex, England: Addison Wesley Longman.
- Atkins, B. T. S., & Levin, B. (1995). Building on a corpus: A linguistic and lexicographical look at some near-synonyms. *International Journal of Lexicography*, 8(2), 85-114.
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman grammar of spoken and written English*. Beijing, P. R. C.: Pearson Education.
- Carter, R., & McCarthy, M. (1995). Grammar and the spoken language. *Applied Linguistics*, 16, 141-158.
- Chandler, J. (2003). The efficacy of various kinds of error feedback for improvement in the accuracy and fluency of L2 student writing. *Journal of Second Language Writing*, 12, 267-296.
- Cobb, T. (1997). Is there any measurable learning from hands-on concordancing? *System*, 25, 301-315.
- Cobb, T. (2003). Analyzing late interlanguage with learner corpora: Québec replications of three European studies. *The Canadian Modern Language Review*, 59(3), 394-423.
- Ellis, R., Sheen, Y., Murakami, M., & Takashima, H. (2008). The effects of focused and unfocused written corrective feedback in an English as a foreign language context. *System*, 36, 353-371.
- Gabel, S. (2001). Over-indulgence and under-representation in interlanguage: Reflections on the utilization of concordancers in self-directed foreign language learning. *Computer assisted language learning*, 14(3/4), 269-283.
- Gavioli, L. (1997). Exploring texts through the concordancer: Guiding the learner. In A. Wichmann, S. Fligelstone, T. McEnery, & G. Knowles (Eds.), *Teaching and language corpora* (pp. 83-99). Essex, England: Addison Wesley Longman.
- Gilquin, G. (2006). The place of prototypicality in corpus linguistics: Causation in the hot seat. In S. T. Gries & A. Stefanowitsch (Eds.), *Corpora in cognitive linguistics: Corpus-based approaches to syntax and lexis* (pp. 159-191). Berlin, Germany: Mouton de Gruyter.
- Goddard, C. (1998). *Semantic analysis: A practical introduction*. New York: Oxford University Press.
- Hamawand, Z. (2005). The construal of salience in atemporal complement clauses in English. *Language Sciences*, 27, 193-213.

- Hatch, E., & Lazaraton, A. (1991). *The research manual: Design and statistics for applied linguistics*. Boston, MA: Heinle & Heinle Publishers.
- Helms-Park, R. (2001). Evidence of lexical transfer in learner syntax: The acquisition of English causatives by speakers of Hindi-Urdu and Vietnamese. *Studies in Second Language, 23*, 71-102.
- Huang, L. S. (2008, August). *Variation of interlanguage lexicon in different textual styles*. Paper presented at the 15th World Congress of Applied Linguistics (AILA 2008), Essen, Germany.
- Huang, L. S., & Su, F. H. (2007, January). *Stylistic variability in interlanguage: The case of MAKE*. Paper presented at 2007 International Conference on Linguistics in Korea, Seoul, Korea.
- Huang, L. S., & Su, F. H. (2009, December). *Corpus evidence of contextual features of causative let in Chinese-English interlanguage*. Paper presented at Joint ALANZ-ALAA 2009 Conference, Auckland, New Zealand.
- Hunston, S. (2002). *Corpora in applied linguistics*. Cambridge, UK: Cambridge University Press.
- Johns, T. (1997). Contexts: The background, development and trialling of a concordance-based CALL program. In A. Wichmann, S. Fligelstone, T. McEnery, & G. Knowles (Eds.), *Teaching and language corpora* (pp. 100-115). Essex, England: Addison Wesley Longman.
- Juffs, A. (1996). *Learnability and the lexicon*. Amsterdam: Benjamins.
- Leech, G. (1997). Teaching and language corpora: A convergence. In A. Wichmann, S. Fligelstone, T. McEnery, & G. Knowles (Eds.), *Teaching and language corpora* (pp. 1-23). Essex, England: Addison Wesley Longman.
- Magno, C. (2009). Self-regulation and approaches to learning in English composition writing. *TESOL Journal, 1*, 1-16.
- Martin, M. (1984). Advanced vocabulary teaching: The problem of synonyms. *The Modern Language Journal, 68*, 130-137.
- McEnery, T., Xiao, R., & Tono, Y. (2006). *Corpus-based language studies: An advanced resource book*. New York: Routledge.
- Montrul, S. (2000). Transitivity alternations in L2 acquisition. *Studies in Second Language Acquisition, 22*, 229-273.
- O'Sullivan, Í, & Chambers, A. (2006). Learners' writing skills in French: Corpus consultation and learner evaluation. *Journal of Second Language Writing, 15*, 49-68.

- Sheen, Y., Wright, D., & Moldawa, A. (2009). Differential effects of focused and unfocused written correction on the accurate use of grammatical forms by adult ESL learners. *System, 37*, 556-569.
- Stubbs, M. (2001). *Words and phrases: Corpus studies of lexical semantics*. Oxford, UK: Blackwell.
- Todd, R. W. (2001). Induction from self-selected concordances and self-correction. *System, 29*, 91-102.
- Wang, L. (2001). Exploring parallel concordancing in English and Chinese. *Language Learning and Technology, 5*, 174-184.
- Wolff, P. (2003). Direct causation in the linguistic coding and individuation of causal events. *Cognition, 88*, 1-48.
- Wolff, P., & Song, G. (2003). Models of causation and the semantics of casual verbs. *Cognitive Psychology, 47*, 276-332.
- Yu, Y. T., & Yeh, Y. L. (2004). Computerized feedback and bilingual concordancer for EFL college students' writing. In *Proceedings of the 21st International Conference on English Teaching and Learning in the R.O.C.* (pp. 35-48). Taichung, Taiwan: Department of Applied Foreign Languages, Chaoyang University of Technology.

About the Author

The author obtained her Ph. D. degree in applied linguistics at University of Texas at Austin, U. S. She is currently an associate professor at National Kaohsiung First University of Science and Technology in Taiwan. Her main research interest is in the field of lexicology, particularly the acquisition of second language lexicon. Her recent studies cover interlanguage lexicon, corpus analysis of second language lexicon, and English polysemy.

Appendix: Test on Causative Verbs

Read each sentence and judge if the usage of causative verbs (*make*, *cause*, or *let*) in the underlined phrase is correct or not. If the usage is correct, write “√” in the first blank. If the usage is incorrect, write “×” and provide a correct phrase in the second blank.

Example:

√ _____ 1. Don't put yourself in a dangerous situation. Try to make him think that you are unique and different from other girls he had met before.

× help me think 2. I like to ask for advice from friends who are different from me because they can let me think in a different way.

* * * * *

1. Tenacity is the most important factor that made Andrew achieve success in his work and become the promoter of Apex Communications.
2. Unhealthy diet is a common reason that makes people get cancer. With the development of biotechnology, more and more food we eat is not natural anymore.
3. Learning is a wonderful thing. But, who can decide to make students have a happy learning environment?
4. Since I am a person who loves to enjoy my own time in my room, I have made the room a comfortable place.
5. Taking care of elderly parents causes children great pressure in their daily life, economics, and leisure time.
6. In 2004, the film “Clean,” which was directed by Oliver, let Maggie win the Best Actress in Cannes Film Festival.
7. Life is precious, and we should avoid letting people commit suicide.
8. We may read lots of books to enrich our knowledge of traveling; however, traveling makes us acquire real experiences through our eyes and hands.
9. The addiction to drug and alcohol would make you have psychological diseases such as melancholia or schizophrenia.
10. As a teenager, he had a lot of pressure from school and his family. He knew that if he did not do well on his school work, his father would never let him play baseball again.
11. When I learned to walk as a child, I was scared of tumbling over, so I would grab everything which could make me stand firm.

12. Being a billionaire, I could do lots of things I want to do. For example, I would help people who need help, hire bodyguards for security, and make my parents' dreams come true.
13. Friends who are different from us are good in broadening our horizon and making us have tolerance of different ideas and people.
14. The institute provided a program to help ordinary people understand the feelings of disabled patients. This program went so well that it let the university require its medical students to enroll in the program.
15. Drug addiction indeed causes serious harm not only to individuals themselves but also to society.
16. The first thing that makes me surprise is the low admission fee for students; they just need to spend 30 dollars for a whole afternoon in the amusement park.
17. In our room, we hang our paintings on the wall to let the room feel much livelier.
18. I don't think there will be a perfect parent but people have a certain image of an ideal parent. What makes an ideal parent?
19. The invention of instant powder coffee made the market of coffee in demand, which stimulated an English chemist to manufacture coffee powder in a large amount.
20. In my opinion, the true meaning of education is to make learners build up confidence and self-esteem.
21. They prefer the films that trigger their interests and put them in the high mood, even let them laugh until they burst into tears.
22. He had an unhappy childhood. Perhaps it is the lack of his parents' love and companion that cause him to become so eccentric and mad.
23. An ideal friend gives me some useful advice to solve my problems. Providing me with advice makes me find the way to achieve my goal.
24. In order not to let you leave a bad impression on me, I must tell you that I was able to say a lot of words when I was ten months old.
25. The food you eat will transfer into energy in your body and make you be like reborn.
26. Corporal punishment can cause more influence on students' behavior than teachers' advice.
27. When I missed my hometown, I often express my negative emotion to Jim, and he always patiently made me encouraged.
28. After you finish your lunch, it's time to go to toilet again. When you walk in the toilet, the bad smell makes you step out right away.

29. If we learn to deal with friends who are different from us, it might be easier for us to communicate with any kind of people and make us be open-minded to accept all kinds of friends.
30. You have to choose romantic love songs, so everyone can dance or sing together and it can make the night reach the climax.
31. One way to keep healthy is to control our emotion. Controlling our mood is a good way to make us not to get angry.
32. Unbalanced consumption of food always causes people ill.
33. We all know that stress can let people be attacked of the heart disease more quickly and easily.
34. When writing compositions, we have to let readers know what we are talking about. A precise and clear topic is a key point to catch readers' attention.
35. Deceit, no matter with good intentions or bad intentions, is cheating someone else and may cause you put into jail.
36. Those couples who don't want a baby think children will make themselves bound and make their lives messy.
37. The purpose of specifying what you have done wrong is to make your girlfriend feel that you have really listened to her.
38. Don't think of your sweet memory with your ex-boyfriend very often; don't let you miss your ex-boyfriend.
39. I often create dreams at different stages of my life. My dreams make me expect a beautiful future.
40. When it comes to potato, Americans are the excellent cooks. They know best how to make it tasty and fascinating.