

An Empirical Study on Concordance-based English Collocation Teaching

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Abstract

The wide use of computer has led to the reform in modern English teaching approach. Computer concordance, a new multicontext presentation mode, provides a new way for collocation teaching. This study explores if there is any difference between on-line concordance teaching approach, concordance-based explicit teaching approach and traditional deductive approach on college students' collocation use and retention. The findings provide empirical support for concordance-based explicit teaching approach's superiority to other approaches in promoting the immediate use and long-term retention of target collocations, which is measured by immediate and delayed test. Teachers are well-advised to pick up the typical concordance lines deliberately, annotate difficult words when necessary before handing out worksheets to learners.

Index Terms: Corpus; concordance; collocation; teaching approach

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1. Introduction

With the widely use of computer, corpus and concordance have become applied to aid foreign language teaching. Corpus refers to a collection of linguistic data upon which some general linguistic analysis can be conducted (Meyer, 2004). It facilitates the authenticity of language input which is of great importance to foreign language learning. Computer concordance provides a new way for language learners with multiple exposures to multiple examples of the same vocabulary item in context. The use of concordances as language-learning tool is currently a major interest in Computer-Assisted Language Learning (CALL) (Malmkajer and Anderson, 1991). This software offers the function to search, retrieve, calculate, and sort certain words/phrases in a very short time and display the results of a given search in KWIC (Key Word In Context).

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2.Literature Review

A. Concordance and Vocabulary Learning

A succession of previous studies contribute to the successful application of Concordance to vocabulary learning. Research by Chan&Liou (2005) suggests that concordance contributes to the increased vocabulary and improved collocation awareness. Cobb (1999) pointed out concordance technology might help solve one of the toughest problems in language learning because if important advantages of meeting words in several contexts could be shown to obtain whether the contexts were in natural texts or on concordance screens. Cobb (2005) suggests that learners can be more independent from the teacher if induction from concordances and self-corrections are emphasized in teaching. Kaur and Hegelheimer (2005)'s study indicates that ESL learners with the aid of both an on-line concordancer and dictionary when practicing vocabulary are more likely to transfer the word knowledge correctly to their writing task.

B. Verb-noun Collocation

The ability to use collocation properly is an important indicator of language production ability. Collocation refers to the tendency for lexical words to occur together.

Nesselhauf (2003) reported an exploratory study about the use of verb-noun collocations by advanced German learners of English in free writing. Of all the miscollocation types, the most frequent type is the wrong choice of verb (24/65). Tang (2005)'s study demonstrates that college students' collocation performance doesn't improve with their vocabulary enlargement. Ma (2009) investigated the features of 3-word lexical chunks in college students' writing, from which a gap was found existing between Chinese college students and native English speakers in the output of target lexical bundles. Previous studies on EFL collocation analysis pointed out that EFL students are seriously incompetent in collocations, especially in collocation production, but the collocation teaching approach remains to be explored relatively little.

C. Application of Concordance to Verb-noun Collocation Learning

Marton (1977) found that English learners couldn't translate the target collocations into English properly although they managed to understand them in reading comprehension, that is to say, limited access to collocation can hardly facilitate collocation production. Some studies(Jiang,1998; Duan and Yan,2004) suggest that learning vocabulary from one-to-one English-Chinese vocabulary list can't promote vocabulary's long-term retention because it reduces students' exposure to collocation and decrease the word processing level in coding by limiting students' chances to guess new words' meaning from context, leading to students' incompetence in collocation.

Then can intensified exposure to collocation facilitate collocation retention and competence? Corpus makes it possible to verify the hypothesis because it presents language learners with multiple exposures to multiple examples of the same vocabulary item in context, which contributes to drawing students' attention on particular collocation, consolidating their memorization through summing up rules by themselves. Woolard(2000) holds that concordance will facilitate collocation learning if being applied to collocation teaching, yet no empirical evidence was provided hereof. Shi (2007) suggests students be encouraged to generalize the collocation rules of some typical words with the aid of on-line corpus such as BNC, LOB and BROWN if related facilities are available. But no specific teaching approach was proposed, not to mention the empirical study on the effect of the approach.

Li (2004)'s COLEC-based study reveals that Verb-Noun (hereinafter referred to as V-N) collocation errors rank the first (50%) among all collocation error patterns made by Chinese English learners. However, little research has yet been conducted to provide empirical support for its effect on V-N collocation learning. That's why V-N collocation is chosen as the topic of this study.

3. Research Design

A. Research Question

This paper explores the effect of Verb-Noun collocation learning under three conditions: on-line Concordancer, concordance-based worksheet and traditional lecture, aiming to answer the following question: Is there any difference between the effect of on-line Concordancer, Concordance-based worksheet and traditional lecture on college students' mastery of collocation?

B. Method

1) Subjects

Three sophomore classes, with student number of 32, 32 and 34 respectively participated in the experiment. No significant difference was found between their final exam scores. They were assigned randomly as on-line concordancer group (Group 1), concordance-based worksheet group (Group 2) and traditional lecture group (Group 3).

2) Instruments

1. Receptive exercises of 10 nouns in the form of multiple choices. Students were required to judge which verb was inappropriate to collocate with the given noun in a sentence among the four or five choices.

2. Productive test of 10 nouns (Immediate test and delayed test)

3) Procedure

Stage One Experiment

Group 1 On-line concordancer group

Students worked on the computers of Self-directed Language Learning Center, who were given directions on how to search online concordancer firstly. Lextutor on-line concordancer was established by Thomas Cobb (http://www.lextutor.ca/concordancers/concord_e.html), which provides a number of useful software for corpus-based vocabulary learning, testing and research. Online Concordancer gives a list of several words, phrases, or distributed structures along with immediate contexts, from a corpus or text collection. English corpora include Brown, BNC spoken & written samplers (1,000,000 words) + text collections. Users can choose the Line Width (chars.) ranging from 100 to 140 and Number of Lines from 10 to 5000. The position of associated words is also optional. They were then required to finish the receptive exercises by using online concordancer and summarize the frequently occurred verbs that could be collocated with the key nouns.

Sample exercise: Choose ONE verb that is inappropriate

E.g. They _____ knowledge not only of Latin, Greek and Hebrew, but also of fifteen modern languages.

A. pursue B. learn C. acquire D. gain

Group 2 concordance-based worksheet

Students were required to finish the same receptive exercises and summarize the collocation rule with the paper worksheet prepared beforehand by the researcher who chose typical collocations of the key 10 nouns,

extracted 5 to 10 of their concordancing lines from online concordancer, and annotated the possibly strange words.

Group 3 Traditional deductive teaching

The researcher presented directly the collocation rule of the 10 nouns. e.g. the verbs that could be collocated with 'knowledge' include: acquire/ gain/ pursue knowledge (学习知识)

One sample sentence was given to each collocation. After the presentation, students were required to finish the same receptive exercises with group 1 and 2.

Stage Two Tests

Immediate Test was taken as soon as the first test was over, composed of 10 collocation blank-filling and 10 sentence translation items, each scored 1 point, totaling 20 points.

E.g. Computer-aided learning can help students to _____ knowledge.

E.g. Students learn not only the importance and full meaning of knowledge itself, but also the effective way of

(学生们不仅可以了解知识的重要性和意义，也能掌握学习知识的有效方法。)

Delayed Test was taken one month later, composed of 10 verb-noun collocation Chinese-English translation. Students were required to translate a Chinese V-N collocation with as many V-N collocations of the key 10 nouns as possible.

e.g. 引起注意/获得成功/满足要求/学习知识/ 到达目标/

4. Results and Discussion

A. Results

Data was processed by SPSS13.0. One-way ANOVA was conducted to test if there is any significant difference among the three groups. Pos hoc comparison was done to determine which groups differ from each other if a significant difference is found.

TABLE 1 One-Way ANOVA

	Source of Variation	Sum of Square	Degree of freedom	Mean Square	F	Sig
Immediate Test	Between group	114.345	2	57.172	7.019	.001
	Within group	773.778	95	8.145		
Delayed Test	Between group	74.983	2	37.492	5.429	.006
	Within group	655.996	95	6.905		

As shown in table 1, One-Way ANOVA results reveal the significant difference among three group students in immediate test and delayed test. [$F(2, 87) = 4.744, p < .05$]

TABLE 2 Post-hoc Multiple Comparisons

	Independent Variables		MD (I-J)	SE	Sig
	Group (I)	Group (J)			
Immediate Test	1	2	-1.90625*	.71349	.032
	2	3	2.54412*	.70292	.002
	3	1	-.63787	.70292	.002
Delayed Test	1	2	-.25000	.65694	-.930
	2	3	1.95037*	.64721	.013
	3	1	-1.70037*	.64721	.036

Post-hoc Multiple Comparisons further indicate that the difference between group 2 and group 1, group 2 and group 3 reach significance, while that between group 2 and group 3 fails to reach significance in immediate test. The difference between Group 3 and group 2, group 3 and group reach significance while that between group 1 and group 2 fail to reach significance in delayed test.

B. Discussion

One-way ANOVA shows concordance-based worksheet group outperformed the on-line Concordancer and traditional deductive groups in the immediate post- test. No significant difference is found between the on-line concordancer and traditional deductive groups. However, both on-line concordancer group and concordance-based worksheet group outperformed traditional deductive groups in the delayed post-test.

The research findings provide empirical evidence for the advantage of concordance-based collocation learning over on-line concordancer and traditional deductive lecturing. Some qualitative studies suggest that mastery of a new word in meaning and usage requires at least 10 to 12 times' presentation of the word (Coady, 1997), and the exposure to different new contexts is the most advisable.

Multiple exposures to multiple examples of the same noun in context, as provided by concordance, facilitates students' grasp of verb-noun collocation. Learning a word from either a short definition or a single sentence context tends to produce inert lexical knowledge that does not facilitate the word's comprehension in a novel context, while learning a word from several contexts, with or without a definition, tends to produce rich, transferable knowledge (Mezynski, 1983). This study suggests that the similar conclusion applies to collocation learning. Collocations are not optimally learned from definitions or translation equivalents but rather from multiple contexts.

It's true that context shown by KWIC presentation mode is short and fragmentary, failing to provide cohesive storyline and prevent readers' comprehension at sentence level, but it is these fragments that have a positive effect on collocation learning. Mondria (1991)'s study found that learners tend to ignore the new word due to their concentration on discourse development while reading texts in complete and contiguous form. The incomplete text fragments presented by concordance, therefore, draw learners' attention to the new collocations. Besides, presentation of a particular word in multiple contexts facilitates word learning, the effect even being more significant in multiple situational contexts. It's likely that usage of a collocation to be presented in different contexts of one particular article but unlikely in different situational contexts due to the restriction of the article's particular theme. However, the usage of a word can be presented in various situational contexts from different articles through concordance.

This study also shows searching on-line concordance of authentic corpus might be of less help to learners, compared with concordance-based worksheet whose learning material was chosen and designed by researchers, each word with 5 to 10 concordance lines displaying the typical usage of the word, with difficult words annotated. Some are even simplified or modified to accord with learners' vocabulary level. In contrast, contexts presented by on-line concordancer contain a large number of confusing strange words which would be a challenge for beginners or intermediate learners. McCarthy (1990) believes that density of strange words is a critical contributing factor to word guessing in context. The ratio of strange words in on-line concordancer is undoubtedly high for foreign language learners. The negative effect on inference of word meanings increases with the rising density of strange words. Besides, strange words don't necessarily refer to those readers meet for the first time, but different meanings of a polysemous word, once presented by different concordancing line, exert a negative effect on inferring the meanings of the target key word. In addition, student's lack of computer and searching skill on line account for their poorer performance with on-line concordancer.

The result of delayed test demonstrates concordance-based collocation learning contributes a lot to collocation's retention in long-term memory. Traditional deductive learning is conducive to the enlargement of collocation within a short period of time, yet the knowledge which is acquired through single sample sentence can hardly be stored in long-term, leading to learners' difficulty in applying them in new contexts. Delayed test results justify Keith Folse (2004)'s view that presenting multiple contexts of a new word benefits the transfer of new words from short-term to long-term memory. Searching through a corpus for clear examples of new collocations produced both definitional knowledge and transfer of comprehension to novel texts, so that the collocations will move from short-term to long-term memory.

5. Conclusion and Pedagogical Implicature

The findings verify the role of concordance-based explicit teaching approach in facilitating collocation learning. They also support the hypothesis that data-driven discovering learning promotes the use and long-term retention of target collocations.

It implies that concordance-based worksheets may be more beneficial for learners in collocation learning. The use of concordance-based worksheets allows teacher and learners to make use of the advantages of corpus data and avoid the possible inconveniences. Therefore, teachers would be well-advised to pick up the typical concordance lines deliberately, annotate difficult words when necessary before handing out worksheets to learners. Besides, researchers may aid teachers with the development of concordance-based data-driven collocation learning software. For example, students are required to fill in the blanks in the given KWIC concordance lines. More lines are presented automatically once students find it necessary to get more hints. The complete sentences containing key words are also available. In this way, vocabulary learning becomes a process of exploration and discovery. Difficulty is manipulated according to individual learner's vocabulary level. It's foreseeable that concordance-aided collocation teaching, a brand new student-oriented vocabulary teaching mode, will promote students' awareness of collocational relationship, boost their initiative in exploratory vocabulary learning and improve their command of vocabulary efficiently.

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