Online Verb-Noun Collocation Instruction with the Support of a Bilingual Concordancer

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Studies on language learning have revealed that collocation knowledge is an important indicator for advanced second language competence. Native speakers' production relies heavily on prefabricated or pre-made chunks such as collocations, which save processing load to achieve language fluency and accuracy. Previous investigation on ESL and EFL students indicated that nonnative learners' collocation competence lags behind the level expected; among various collocation types, verb-noun (V-N) collocation has been found to be more difficult for learners. Various collocation instruction programs have been conducted to improve EFL learners' collocation use and have gain positive effects. Recently, some collocation instructional programs were carried out by teachers' guidance through concordancing (automatic display of key words in context); such a method has been claimed to be beneficial for providing ample collocation use in concordances, which learners can read and induce patterns from by themselves. The current study examines the effects of web-based bilingual concordancers with six practice units (TOTALrecall and Tango, developed in CANDLE project). Two teaching approaches, inductive and deductive teaching methods, and different collocation types were taken into consideration. 74 senior high students participated in the study. The effects of online materials on learners' performance at different vocabulary levels, their collocation performance, and their perception of computer-assisted collocation learning were explored by a vocabulary test, a posttest on collocation, and an evaluation questionnaire. It was found that learners of different vocabulary levels performed significantly differently both before and after the treatment period with mostly satisfaction about the online materials. Those who liked the concordancer seemed performed better. Implications are suggested.

COLLOCATION COMPETENCE AND COLLOCATION TEACHING

Collocation is a string of words co-occurring naturally and would become less acceptable if one component is substituted by another similar word, such as "do the laundry" and "make the laundry". The meaning of collocation is inferable from its constituted parts but the combination of words is unpredictable and psychologically salient. Recently, multi-word units or chunks have gained researchers' attention in vocabulary instruction in the second language field (Nation, 2001). Nattinger and DeCarrico (1992) noted that prefabricated units observable in native speakers' language such as collocations speed processing in comprehension and production and cause the drop between native speakers' and nonnative speakers' language proficiency. Lewis (2000) in his Lexical Approach has further claimed the necessity and benefits of teaching collocation, holding the view that collocation improvement help learners break through "intermediate plateau" and achieve higher language proficiency. The importance of collocation has aroused scholars' interest in the nature of collocation and collocation instruction.

Some studies have been conducted to probe into collocation analysis. Bahns and Eldaw (1993) indicated that German advanced EFL college students had problems with producing English collocation. Nesselhauf (2003) analyzed German advanced learners' writing of English and found that, in terms of verb-noun collocations, the most frequent miscollocation type is wrong choices of verbs. He explained that the verb in a collocation has a restricted sense, which makes its correct use more difficult if learners cannot fully distinguish subtle differences.
among verb collocates. The collocations not congruent in learners’ first language (L1) and second language (L2) were far more difficult for learners to acquire.

On Taiwanese learners, Liu (1999a) examined collocational errors in 127 Chinese college students’ final examination papers and their 94 compositions. The error analysis revealed that verb-noun collocation errors (verb + noun/pronoun, verb + propositional phrase) appeared most frequently and students produced collocation errors involving de-lexicalized verbs such as make or do. With the help of computer technology, Liu (2002) investigated V-N miscollocations in Chinese learners’ essays through lexical semantic investigation. She indicated that 87% of the lexical miscollocations (233/265) were grouped into V-N miscollocations and 93% of them were due to the misuse of verb collocates. As for reasons behind miscollocations, 56% of missed collocations were semantically related such as synonyms (e.g., *carry out my goal instead of achieve my goal), hyponyms (e.g., *create songs instead of compose songs), and troponyms (e.g., *break the foundation instead of damage the foundation). Another 38% of the V-N miscollocations were attributed to L1 interference; split category (e.g., add and increase) and direct translation (e.g., *write homework instead of do homework). As for secondary students in Taiwan, Chen (2002) manually analyzed collocation errors in ninety examination papers of Taiwan high school students. Misused verb-noun collocations were found to dominate lexical miscollocations. L1 interference, the employment of literal translation, is a common source of errors, and deserves more attention. Among various types of collocations, the verb-noun lexical collocation was found to be particularly difficult for learners to master. Furthermore, V-N miscollocations can be attributed to three main reasons: (a) L1 interference, (b) misuse of de-lexicalized verbs, and (c) lack of knowledge of collocational restrictions in semantically related lexemes such as synonyms, hyponyms, and troponyms. More studies that investigated Taiwanese learners’ collocation competence are listed in Table 1.

Table 1. Studies on Collocation Analysis in Taiwan

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Year</th>
<th>Participants</th>
<th>Collocations</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wu</td>
<td>1996</td>
<td>50 undergraduates (25 English majors and 25 non-English majors)</td>
<td>Lexical collocations (verb + noun, and noun + verb)</td>
<td>Lack of lexical collocation knowledge</td>
</tr>
<tr>
<td>Liu. C. P.</td>
<td>1999a</td>
<td>128 undergraduates</td>
<td>Grammatical and lexical collocations</td>
<td>Lack of grammatical and lexical collocation knowledge</td>
</tr>
<tr>
<td>Liu. C. P.</td>
<td>1999b</td>
<td>127 undergraduates</td>
<td>Grammatical and lexical collocations</td>
<td>1. VO miscollocations stood out 2. The sources of errors in misused VO collocations</td>
</tr>
<tr>
<td>Liu. C. P.</td>
<td>2000b</td>
<td>34 Taiwanese English majors</td>
<td>Lexical collocations</td>
<td>Lexical collocation producing strategies identified</td>
</tr>
<tr>
<td>Shih</td>
<td>2000</td>
<td>Undergraduates’ compositions in TLCE</td>
<td>Grammatical and lexical collocations</td>
<td>Two factors resulting in synonymous errors</td>
</tr>
<tr>
<td>Wang</td>
<td>2001</td>
<td>204 Taiwanese English majors</td>
<td>Lexical collocations (verb + noun)</td>
<td>collocations knowledge not increased along academic levels</td>
</tr>
<tr>
<td>Liu, L. E.</td>
<td>2002</td>
<td>Undergraduates and high school students’ compositions in ETLC</td>
<td>Lexical collocations (verb + noun)</td>
<td>1. V-N lexical miscollocations occupied the major portion of lexical collocation errors 2. The sources of VO miscollocations identified</td>
</tr>
<tr>
<td>Chen</td>
<td>2002</td>
<td>30 high school students</td>
<td>Grammatical and lexical collocations</td>
<td>Collocational errors classified</td>
</tr>
<tr>
<td>Lin, Yuan &amp; Feng</td>
<td>2003</td>
<td>272 undergraduates</td>
<td>Lexical collocations (verb + noun)</td>
<td>Deficiency of lexical collocation knowledge</td>
</tr>
</tbody>
</table>
Being aware of learners' weakness in collocation use, some explicit collocation instruction programs have been provide for Chinese EFL learners in classroom settings, and found positive effects (Lin, 2002; Liu, 2002; Tseng, 2002). Liu (2000) have found that collocation instruction enabled college students to produce more varieties of collocations in their writing, particularly in de-lexicalized verbs. Yet, learners did not make improvement in collocations without Chinese translation equivalents and more errors attributed to intralingual transfer appeared in students' compositions due to the lack of knowledge of collocation restrictions.

In senior high school contexts, Lin (2002) examined high-achievers' and low-achievers' performance in receptive and productive verb-noun collocation tasks after collocation instruction. After the instruction, both groups held positive attitudes toward collocation teaching activities. The results pointed out all students made more progress in receptive collocation tests than productive ones and high-achievers generally performed better than low-achievers, but low-achievers made significant progress in the productive task. Lin confirmed the possibility of incorporating collocation units into senior high school vocabulary teaching. Similarly, Tseng (2002) divided 94 high school participants into an experimental group, who received 12 weeks of explicit collocation instruction, and a control group, who did not receive any training. Before the instruction, the students took a pretest on collocation, and filled in a background questionnaire about vocabulary learning behaviors. The results in questionnaires indicated that students knew little about the concept of collocation, and the pretest showed that verb-noun collocations with de-lexicalized were easier for students to produce. After collocation instruction, the experimental group far exceeded the control group in the posttest regardless of their prior collocation levels. The experimental group’s performance was found to have no significant difference across the six collocation types investigated; that is, students made improvement in six types of collocations through collocation instruction.

The previous studies above shed light on the importance of collocation in foreign language. Students' difficulty in mastering collocations has prompted researchers to administer collocation instruction for those from a Chinese background; yet, few studies have focused on verb-noun collocations, which students are most deficient in. Most collocation teaching programs were classroom-based, where the efficiency of computer-assisted learning is left unexplored.

CONCORDANCING-SUPPORTED COLLOCATION LEARNING

Electronic referencing tools such as a bilingual concordancer (computer key word search programs with a corpus) can provide learners with multiple examples for a certain item, which allows learners to adjust their misconceptions of language regularities and induce rules. The data-driven learning lays out a blueprint where learners could read a great quantity of authentic texts and teachers can adapt inductive learning with less demanding. A bilingual concordancer, TotalRecall, is developed in an online English learning project--CANDLE (Corpus And NLP for Digital Learning of English, http://candle.cs.nthu.edu.tw) with over 2 million words in total mainly from Sinorama magazine, promoting translation reuse by displaying mutual translations between English and Chinese. You (2004) found that TotalRecall facilitated learners to induce language use and self-correct errors. Another collocation concordancer, Tango, in CANDLE permits learners to consult collocations such as verb-noun collocations and adjective-noun collocations (see Figure 1). Learners perceived the need and convenience of a collocation concordancer in Chan and Liou's (2005) study.
Quite a few studies have examined the effects of concordancing on various aspects of language learning (e.g., Chambers, 2005; Chan & Liou, 2005; Horst, Cobb, & Niclae, 2005). For instance, Hirst, Cobb, and Niclae (2005) combined the use of concordance, dictionary, cloze-builder, hypertext, and a database with interactive self-quizzing feature in several ESL courses for academic English and examined the effects of those tools and activities on 150 students. Statistic analyses supported the learning gains of those tools and the support for vocabulary learning that context sentences provided. To understand how corpus consultation can precisely assist in language learning, Chambers (2005) examined the data of the students’ consultation of the corpora, including choice of search word(s), analytical skills, the problems encountered, and their evaluation of the activity. Although she found corpora consultation can complement foreign language learning in her various educational contexts, limitations were also found such as the small size of corpora and lack of learner training.

Specifically for collocation learning, few studies have explored the possibility of utilizing concordancers to help EFL students except Sun and Wang (2003) and Chan and Liou (2005). Sun and Wang examined the effectiveness of inductive and deductive teaching approaches in learning collocations of different difficulty levels with the help of an online monolingual concordancer. Four collocation patterns were selected based on two experienced EFL experts’ difficulty judgments. 81 senior high students in Taiwan were randomly divided into two groups. The two groups used two corresponding online exercise versions designed with the deductive or the inductive approach respectively. The deductive group was given the rule explanations and example sentences first while those in the inductive group had to induce the collocation patterns independently from the concordances. Both groups took the pretest, a one-hour instruction section, and the posttest. Posttest results indicated that overall the inductive group improved significantly more than the deductive group. Easier collocations were prone to be more suitable for the inductive approach with the help of concordancing, whereas there were no significant differences between students’ performance influenced by inductive or deductive methods with respect to difficult collocations. Like other studies, they did not pay enough attention to the dominant EFL weakness, V-N miscollocations. The effect which the L1 translation in a bilingual concordancer may bring is unexplored.

Chan and Liou (2005) used the five units of Collocation Practice (advanced) on college students under the CANDLE project. Five verb-noun collocation units in the module were designed with either an inductive teaching method by means of a bilingual concordancer
(TotalRecall), or a deductive teaching method with semantic grid analysis. 32 freshman students participated with measurements of a collocation test given before and after the online learning period and again two and a half month later. An evaluation questionnaire was given after online learning ended. Results indicated that learners made significant collocation improvement immediately after the online practice but regressed later. Different collocation types, induction/deduction and learners with different prior collocation knowledge were not equally receptive to the practice effects. Both the online instructional units and the concordancer were acceptable to most participants. The bilingual concordancer is suggested to scaffold collocation learning.

In sum, the potential of new computer bilingual or multilingual concordancers has not been fully explored. Previous literature on collocation learning indicates much more studies have been conducted on the college groups. Research on high school learners is needed as there has been a larger population of high school students than that of college students. The current study therefore aims at investigating Chinese EFL senior high school students’ learning of verb-noun (V-N) collocations with the help of computer-assisted language learning (CALL). The same five units used in Chan and Liou (2005) and another similar collation unit were used with the incorporation of a web-based bilingual concordancer (TotalRecall) as an online reference tool. Further, Tango, a collocation consulting tool in CANDLE, was encouraged to be used by students. Aspects of learners’ collocation performance, proficiency levels, and their feedback on online collocation learning are considered. Besides, the differences of collocation performance and perception of online collocation practice between college students and senior high school students are compared.

THE STUDY

Seventy-four third-year senior high students from three classes in a Taiwan public school participated in the study during their winter break. It took them 2 weeks to complete the six online collocation units.

The instruments used in the study included a pretest, a posttest, and an evaluation questionnaire. The pretest was the written part of students’ final examination papers, including a vocabulary test and translations with blanks to fill in. The pretest was 20 points in total and was used to evaluate students’ entry vocabulary proficiency. The posttest with forty collocation items, one point for each item, was used to measure whether learners acquired the target collocations taught in the six units (see an example below). The evaluation questionnaire with 35 items was used to examine learners’ perception of online collocation instruction (deductive and inductive teaching) and the web-based bilingual concordancers. The pretest was given before the winter break. After students completed six online sessions, the posttest and the evaluation questionnaire were given at the beginning of the spring.

He g_______ no indication that he was ready to compromise. [answer: gave]

The six online units included four different collocations types: (a) synonymous verbs, (b) hyponyms and troponyms verbs, (c) de-lexicalized verbs, (d) verb-noun collocations that are non-congruent in Chinese and English. Two teaching approaches were employed in six units respectively, the inductive and deductive methods.

RESULTS AND DISCUSSION

Correlation for the two tests based on performance on the students achieved significant level (0.41), indicating they measured similar constructs of students’ English proficiency. 74 students were divided into two groups based on their performance on the pretest. 40 were assigned to the high-proficiency group (HG) and 34, the low-proficiency group (LG) The
independent T-test comparison of the pretest scores of the two groups indicated they were indeed different as in Table 2 ($t=-12.183$, $p=.00 < .01$) in the beginning of the experiment.

**Table 2. The Independent t-test for HG and LG in the Pretest**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>S. D.</th>
<th>t-value</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>40</td>
<td>15.58</td>
<td>8.50</td>
<td>-12.183</td>
<td>72</td>
<td>.000*</td>
</tr>
</tbody>
</table>

The mean of posttest scores of all students was 9.78 (out of the total 40). Without surprise, the HG and LG groups performed significantly differently from each other ($t=-4.747$, $p = .000 < .05$) after the experiment, based on the scores of the posttest (see Table 3). The HG performed significantly better than the LG. It indicated that there is still a gap of collocation knowledge between high-proficiency and low-proficiency groups.

**Table 3. The Independent t-test for HG and LG in the Posttest**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>S. D.</th>
<th>t-value</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>40</td>
<td>12.28</td>
<td>6.85</td>
<td>-4.747</td>
<td>72</td>
<td>.000*</td>
</tr>
</tbody>
</table>

Mean differences were computed on all the 35 items in the evaluation questionnaire. Overall, students were positive toward the general design of the online materials (3.73/5.00, the average of the 25th to 32nd items). Students perceived collocation learning via online instruction (3.32/5.00, the 1st item) and their future use of similar practice positively (1.86/2.00, the 2nd item). Students less liked the concordancer-aided units (3.05/5.00, the 3rd item) and less preferred the future use of concordancer-aided units (1.69/2.00, the 4th item). There was no difference between the preference of any of the teaching methods and students’ posttest performance.

In particular, they preferred the combined methods of both inductive and deductive teaching (3.83>3.38>3.34, combination and each of them). Yet, if students’ proficiency level was considered, group preferences were evident. By means of examination through the non-parametric statistic Wilcoxon Signed Rank test, the low-proficient group preferred the deductive method to the inductive method ($z = -3.21$, $p = .000 < .05$) and liked the deductive method better than the combination method ($z = -1.979$, $p = .000 < .05$). It seems that the low-proficient group relied more on the deductive method.

Comparing the performance of senior high students and that of college students (Chan and Liou 2005), some similarities and differences were found. The posttest scores showed that senior high students’ collocation performance was much worse than the college counterparts. Besides, in both groups, high-achievers performed better than low-achievers in the collocation posttest. More efforts would need to be made to enhance senior high students’ collocation competence, particularly low-proficiency learners.

Comparing types of the feedback from senior high and college students (Chan, 2004) pointed out some differences. As for the perception of the online collocation practice and the future use of a similar design, senior high and college students both held positive attitude; yet, both groups less preferred concordancer-assisted collocation learning materials. Both groups preferred the combination method the most and were less accustomed to the inductive learning. The finding that the low-level learners in the senior high group particularly depended on the deductive method indicates that they are used to teacher-centered classrooms and lack experiences of independent learning and self-study. It seems the ideal of learner autonomy that goes with the inductive concordancing method may take a bit higher English proficiency to feel
comfortable with. Furthermore, after close examination of the results of the deductive method, it was found that senior high students were confused with the collocations involving exceptional usages (3.55/5.00), and might not easily synthesize abstract rule explanations (3.66/5.00). It seems that teachers’ illustrations play a crucial role in their learning.

As regards senior high students' and college students' feedback in inductive learning, results showed that both groups agreed that inductive learning allows them to read authentic texts and inspire them to notice various collocation use. Also, both groups agreed the sentences presented by the bilingual concordancer are comprehensive and the mutual translations provided are helpful. The result indicates that they often read Chinese translations (3.47/5.00). However, the senior high group mentioned that they had more difficulty in searching for appropriate verb-noun collocations from the corpus (3.65/5.00). The concordancing process took them more time (3.35/5.00) and they reported insufficient amount of data collected in TotalRecall (3.62/5.00). The findings revealed that senior high students might need more training in concordancing, which helps them master and make better use of the concordancer. In Chan and Liou (2005), students’ appreciation of the concordancer seemed to be related to their performance. The hypothesis was examined on the senior high group. It was found that the use of TotalRecall supported the assumption (see Table 4) but Tango did not (t=-1.064, p>0.05). The participants who preferred TotalRecall performed significantly better. Those who liked concordancing learning benefited more from online collocation instruction.

Table 4. Comparison of Preference of Total Recall and the Posttest Performance.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S. D.</th>
<th>t-value</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>54</td>
<td>20</td>
<td>10.70</td>
<td>7.30</td>
<td>2.409</td>
<td>72</td>
</tr>
</tbody>
</table>

Note: High: the scores of the item 3rd are higher than 3.05. Low: the scores of the item 3rd are lower than 3.05.

Concerning the design of the online materials, both senior and college students liked the immediate feedback and explicit explanations the most. In an item of the Questionnaire used in Chan and Liou (2005), students suggested two features to be enhanced: the part-of-speech marking of the key word and addition of specialized collocation aids (output ‘make a presentation’ or ‘give a presentation’ instead of a jungle of example sentences with ‘presentation’). In this study, more specialized collocation concordancers such as Tango were developed and used; although it was not perfect, senior high students noted that Tango, the collocation concordancer, could help them consult and search for collocations easily and conveniently (3.53/5.00).

CONCLUSION AND IMPLICATIONS

The previous studies pointed out EFL learners are weak in collocation use. The results in our study show that consistent and systematical collocation instruction is needed, particularly for low-proficient learners. Collocation instruction could help enhance students' collocation knowledge and their awareness in learning collocation in the future.

In senior high school learning settings, language teachers usually take a dominant role in classrooms, and students tend to be passive learners. Although students agreed with the strength of concordancing learning, they might take time to benefit from data-driven learning that stresses active and independent thinking. To help students learn how to take advantage of inductive learning, teachers can infuse training lessons into the regular syllabus equip students with essential concordancing skills, which grant students to efficiently utilize online
referencing tools. Training periods might heavily influence students' future use of concordancers.

From the results, it is found that online collocation instruction has potential to assist EFL high school learners' collocation learning. Students like immediate answers and explicit feedback. In senior high schools, teachers are the main learning source for learners while computer-assisted language learning contexts provide learners another channel to acquire language through data-driven learning that may lead to learner autonomy helpful for growth after they leave schools or formal instruction.

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REFERENCES


Appendix: The Evaluation Questionnaire

各位同學大家好:
線上教學的活動已告一段落，非常感謝各位同學對本活動的參與。請同學依您參與此線上教學的經驗填寫此問卷，結果僅供研究參考，絕不私自對外公佈，請同學依據自己實際的學習經驗，在適當的□中打ˇ。謝謝您的參與和合作。

(共 35 題)

班級:_________________姓名:_______________學號:_______________

第一部分(Part I): 用了線上單元教學之後，我對英文搭配詞學習的感覺。(Feelings about learning English collocations)
1. 我對使用了此六個單元線上教材來學習英文動名詞搭配詞的感覺:
   □非常喜歡 □喜歡 □普通 □不喜歡 □非常不喜歡
2. 如果有上網機會，未來是否會希望使用此類型的線上教材學習其他種類的英文搭配詞，例如形容詞+名詞(heavy smoker)，副詞+形容詞(sincerely injured)。
   □ 會 □不會
   為什麼? _________________________________________________________
3. 單元三至單元六裡，我對使用了 TotalRecall 這個雙語資料檢索系統來學習英文搭配詞的感覺:
   □非常喜歡 □喜歡 □普通 □不喜歡 □非常不喜歡
4. 未來若有上網機會，是否會利用 TotalRecall 這個雙語資料檢索系統來學習英文搭配詞?
   □ 會 □不會
   為什麼? _________________________________________________________

第二部分(Part II): 我對教學方法的感覺 (Feelings about the online teaching methods)

A. 關於演繹教學法(The deductive method)
5. 學搭配字詞時，我較喜歡「先列舉規則，再提供實例給我練習」的演繹教學法，例如單元一。
   □非常同意 □同意 □無意見 □不同意 □非常不同意
6. 我覺得演繹教學法可以幫助我節省時間而迅速地瞭解規則。
   □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
7. 我覺得演繹教學法可以幫助我較有系統地瞭解不同搭配詞的使用規則。
   □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
8. 我覺得搭配詞常有很多的例外用法，演繹教學法無法充分處理例外用法。
   □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
9. 我覺得規則解釋太抽象，我比較喜歡直接從真實例子中看搭配詞如何使用。
   □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
   其他意見 _______________________________________________________
B. 關於歸納教學法(The inductive method)
10. 學搭配字詞時，我較喜歡「從雙語資料庫的眾多實例中，讓我自行分析歸納」的歸納教學法，例如單元三。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
11. 我覺得歸納教學法讓我可以從真實語料中找到答案，搭配詞學習時印象比較深刻。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
12. 我覺得歸納教學法讓我可以實際從語料中看到更多樣化的搭配用法。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
13. 我覺得用歸納教學法時，閱讀眾多例句可以引發我去思考不同搭配詞用法間的細微差異。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
14. 我覺得用歸納教學法時，要從語料中找出合適的動詞名詞(\(V+N\))搭配有困難。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
15. 我覺得用歸納教學法時，分析語料很浪費時間。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
16. 我覺得用歸納教學法時，語料中英文句子太難。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
17. 我覺得用歸納教學法時，所利用之資料庫(TotalRecall)的中英文間之翻譯可以幫助我學習英文搭配詞。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
18. 我覺得用歸納教學法時，所利用之資料庫(TotalRecall)網路連線速度太慢。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
19. 我覺得用歸納教學法時，所利用之資料庫(TotalRecall)網路連線不穩定。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
20. 我覺得用歸納教學法時，所利用之資料庫(TotalRecall)所包含的語料不夠多，找不到所要的答案。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
   其他意見 _______________________________________________________
21. 我查詢 TotalRecall 時，我看英文例句之中文翻譯的頻率。
    □ 每次都看 □ 常常看 □ 有時看，有時不看 □ 很少看
    □ 只看英文部分
C. 關於綜合教學法 (feelings about the combination of inductive and deductive methods)
22. 如果可以，我喜歡「在列舉規則解釋外，另外也提供雙語資庫讓我進一步驗證其語言規則」的教學方式。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
23. 我覺得瞭解規則解釋後，再閱讀雙語資料庫中的眾多實例，可以幫助我更清楚地理解規則的使用。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
24. 我覺得看完語料庫中眾多實例之後，再與所提供的規則解釋相對照，可以幫助我進一步驗證其規則。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
其他意見 ______________________________________

第三部分(Part III): 我對六課線上教材的感覺。(feelings about the instruction design of the online materials)

25. 我覺得線上教材的難易適中
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
26. 我覺得線上教材的各練習題前的指令說明容易理解。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
27. 我覺得作答完畢之後，回饋訊息中的分數統計對我有幫助 (例如: 正確答案有 10 個，您答對了 3 個)。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
28. 我覺得作答完畢之後，回饋訊息裡所指出的正確答案，對我有幫助。(例如: 你使用了不適當的動詞，正確動詞應為 build 或是 construct。)
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
29. 我覺得作答完畢之後，回饋訊息裡所指出的錯誤解釋，對我有幫助。
    (例如: 解釋: 根據語意要素分析，「蓋體育館」所牵涉到的語意成分包括「將一些材料、或零件組合起來」及「與具體名詞同時出現」。)
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
30. 我覺得作答後得到立即的答覆，對我學習有幫助。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
31. 我覺得各課內容的份量適中。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
32. 我覺得線上教材的的排版易讀。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意
33. 我覺得在第三課至第六課中，若是將搭配詞查詢工具 TotalRecall (雙語資料庫)換成 Tango (搭配詞查詢系統)，對我搜尋搭配詞更有直接方便。
    □ 非常同意 □ 同意 □ 無意見 □ 不同意 □ 非常不同意

第四部份(Part IV): 線上系統可以改進之處。(improvement about the online materials)

34. 如果可以的話，你認為此六個線上搭配詞教學單元的設計該如何改進?
    □ 好，不需改進
    □ 需要做以下的改進 (可以複選)
        1. 增加其他題型
        2. 增加內容趣味度
        3. 增加使用系統過程中，與其他使用者互動或討論的機會 (例如兩人或是小組討論)
        4. 增加線上個人筆記簿，讓我可以紀錄線上新學到的搭配詞
        5. 其他 ______________________________________
35. 如果可以的話，你認為此雙語資料庫_TotalRecall_的設計該如何改進?
很好，不需改進

需要做以下的改進（可以複選）

1. 增加資料庫的語料
2. 查詢速度能快點
3. 使用較漂亮的字體
4. 增加選擇詞性的查詢功能，例如我只要看當名詞用時的 address(演講)
5. 增加搭配詞查詢的功能，例如我要知道 medicine 前面可以使用哪些搭配動詞
6. 其他________________________________________________________

~~~謝謝您的參與與合作~~~