Abstract

L2 writers of English (N = 45) in an intensive English program in the southwestern part of the USA were divided into three groups. Each group was provided with collocation training for a different collocation tool: Longman Dictionary of Contemporary English (LDOCE), Macmillan Collocation Dictionary (MCD), and www.wordandphrase.info (WPI). After training, each group used the collocation tool to correct 16 miscollocations embedded in an essay-format collocation test. After each test, the participants completed a quality review checklist. The procedure was repeated three times so that each group used each tool but in a different order. The results indicated that online collocation tools (LDOCE and WPI) contributed more than a book collocation dictionary (MCD) to accurate collocation production in L2 writers’ essays. In particular, L2 writers favored WPI because it was easier to navigate and it helped them locate the correct collocations.

I. Introduction

Collocations, two or more words that co-occur (e.g. extensive research, conduct a study), are linked with native-like lexical accuracy and fluency (Nation and Webb 2011). Yet even advanced-level second language (L2) learners frequently have difficulty producing appropriate collocations. Notably, the ability to use collocations productively seems to be a huge challenge for most university-level L2 writers (e.g. Chan and Liou 2005). This challenge occurs for the following reasons. First, collocations are particularly tricky because one word can have multiple collocates. For example, the word strategy has about 40 collocates, according to the Longman Collocation Dictionary & Thesaurus (2013). The luxury of being a native speaker of a language is that native speakers are familiar with most collocation choices for a word (Groom 2009), while it is a
daunting task for non-native speakers to recognize and (even more challenging) to produce all feasible collocations for a given word. Second, L2 writers are “not sure which words can go with which words” (Jiang 2009: 108) because some collocations carry the idiomatic meaning. For example, take the money and take a course might be straightforward for learners; however, take sides might be challenging for learners to comprehend (Nesselhauf 2003). Third, despite the fact that collocations are frequently used in writing and speech, they are underrepresented in language teaching textbooks (Tsai 2015) or often presented in isolation – out of context. This is not helpful because collocations occur in discourse; thus L2 writers should be familiar with the contextual use of collocations.

L2 writers can use dictionaries to address their collocation problems; however, learners often “have no knowledge of collocation dictionaries or other potential resources for working with collocations independently” (Henriksen 2013: 42). To help L2 writers achieve accurate and fluent collocation production in their written work, researchers believe that L2 writers should take advantage of learner-friendly collocation tools: online, electronic, or hard copy resources/dictionaries designed for language learners. Some dictionaries/resources are referred to as tools in the study reported here. To explore whether L2 writers benefit from collocation tools, the current study examined the effect of three collocation tools (two online and one paper) on the accurate correction of miscollocations by L2 writers—particularly international students who are studying English for Academic Purposes (EAP).

2. Background

Many researchers believe that L2 learners would benefit from collocation tools to improve the lexical accuracy of their writing. Despite the fact that language teachers introduce paper-based or CALL-mediated collocation tools to their students, it is still up to their learners whether or not to accept these tools. Sometimes, learners are unable to retrieve appropriate collocations from a tool, which eventually affect the ‘acceptance’ of a collocation tool. Learners’ degree of ‘acceptance’ in selecting a collocation tool might depend on the following factors.

First, learners should like the format of a tool. Some learners prefer online, while others prefer a book dictionary. Similarly, a format can also include a dictionary type such as English-English learner dictionaries (e.g. Macmillan Dictionary; Cambridge Dictionary) compared to specialized English-English collocation dictionaries (e.g. Oxford Collocations Dictionary for Students of English - OCDSE; Longman Collocations Dictionary and Thesaurus - LCDT). A format can be a contributing factor as long as it leads to an accurate production of collocations. For example, Lew and Radlowska (2010) compared two paper-based dictionaries – LDOCE (a learner dictionary) and OCDSE.
(a collocation dictionary) – to determine which would help university-level intermediate Polish learners of English \((N = 18)\) supply missing collocations in sentences. The test results showed that the LDOCE group produced more accurate collocations than the OCDSE group (68% versus 49%). However, these differences were not statistically significant. In her earlier study, Dziemianko (2010) compared the usefulness of paper and online monolingual dictionaries in receptive and productive collocation tasks. Participants were upper-intermediate and advanced Polish students \((N = 64)\), who were divided into two groups: a paper-dictionary group and an online-dictionary group. Immediately after the dictionary training session, the participants were given a pretest that included productive and receptive vocabulary tasks. In a posttest administered after two weeks, it was found that the online dictionary group performed significantly better in receptive and productive collocation tasks than the paper dictionary group.

In some studies, online corpus tools were used as an alternative to collocation dictionaries and were found to be helpful for collocation production. Geluso and Yamaguchi (2014) examined the effectiveness of the Corpus of Contemporary American English (COCA) for collocation learning by university-level Japanese learners. Almost all the students \((28/29)\) thought that COCA helped them improve their knowledge of collocations for speaking and writing skills. Slightly more than two thirds of the students believed that COCA was helpful for their writing. Daskalovska (2015) also examined the effect of the COCA corpus on L1 Macedonian learners’ receptive and productive collocation knowledge. Her findings revealed that the participants who were trained how to use COCA did not only perform significantly better than the control group in a productive collocation task (e.g. fill in the blank, write sentences), but were also able to retain more collocations in the receptive tasks (e.g. matching, multiple-choice). In sum, the format of a collocation tool plays a role in retrieval of successful collocations for production purposes.

In addition to format, learners pay attention to the presentation of collocations in entries. When a word entry lists too much information, learners are often confused. In a study by Komuro (2009), some students complained that certain entries had too many collocation choices and some were synonymous; therefore, students had difficulty in understanding the nuances of the collocates. Sometimes learners are not aware of the position of collocations in an entry. Dzimianko (2014) examined whether the presentation and the place of verb + noun collocations affected the use of collocations by Polish intermediate learners of English \((N = 358)\). Three groups of 119 participants were assigned to different test conditions: a collocation box for the target words (i.e. list of collocations), the target words in bold before examples, and the target words in bold within examples. The position conditions placed entry initial (at the beginning of the entry) or final position. Her findings revealed that the participants performed significantly better when the target collocations
were presented in bold before examples or bold within examples. In terms of the position, the participants made significantly more correct choices when the target collocations were listed at the end of the entry.

To help learners maximize their dictionary use, learners are advised to know how to utilize a tool for collocation learning. Lew and Galas (2008) reported that most of their participants (50 out of 57) who were primary-level Polish learners of English did not have any previous dictionary training. Furthermore, 47 of the 57 participants admitted not reading any instructions provided in the early pages of a dictionary. After teaching 12 dictionary lookup strategies, ranging from alphabetical ordering of entries to symbols and abbreviations, Lew and Galas (2008) reported that the experimental group scored significantly higher than the comparison group and the authors suggested that providing explicit instruction on dictionary lookup strategies would improve learners’ overall dictionary skills. Thus, learners should be equipped with strategies for how to locate a collocation in a tool or to generate a collocation in writing. Dictionary look-up skills should not be taken for granted (Chon 2008, Ranalli 2013) because searching for a collocation while doing a writing task requires an immense cognitive load on the part of learners (e.g. extracting appropriate collocations from a dictionary to write an essay, or filling in the blank in a sentence or replacing a miscollocation with a correct collocation).

3. The study

The present study examines the effect of two online collocation tools (WPI, LDOCE), and one hard-copy collocation tool (MCD) on the correct production of verb + noun and adjective + noun collocations. It attempts to answer the following research questions:

(1) To what extent do three collocation tools affect ESL students’ collocation corrections in written work?
(2) What do ESL writers think of these three tools in terms of training, navigation, and helpfulness?

3.1. Participants

The overall number of participants ($N = 45$) comprised three intact ESL groups of upper-intermediate proficiency adult international students enrolled in an intensive English program (IEP) in a university in the southwestern part of the USA. Level 5 students, in a 6-level, US-based IEP, who were taking Writer’s Workshop course (i.e. a support course linked to an undergraduate-level composition course), participated. They were designated higher-intermediate students based on their placement test scores. Only 31 participants
of 45 decided to complete the demographic questionnaire. There were 26 male and five female students. In terms of participants’ first languages, the majority spoke Arabic (10), Portuguese (Brazilian) (10), or Chinese (8). On average the participants had been studying English for about three years and had been in English-speaking countries (predominantly the United States of America) for about eight months. At the end of the demographic questionnaire, there were four questions to ascertain participants’ familiarity with general computer skills, focusing on participants’ degree of comfort using a computer, the Internet, and online dictionaries. Based on their responses, the students felt comfortable using a computer, surfing the Internet, using online dictionaries, and writing assignments on computers. In sum, they were all proficient in computers.

3.2. Materials

Collocation tools, instructional materials, and tests used in the study are described in this section.

3.2.1 Collocation tools. Three collocation tools, two online and one hard-copy, were used in the study: an online version of the Longman Dictionary of Contemporary English (LDOCE), an online collocation tool wordandphrase.info (WPI), and a hard copy of Macmillan Collocation Dictionary (MCD). The features of these collocation tools and their potential use for collocation learning are described below.

One of the three tools, LDOCE, which is freely available at http://www.ldoceonline.com/, contains around 220,000 collocations (Lew and Radlowska 2010). The online version of LDOCE has three features that made it appropriate for use in this study. First, the LDOCE lists collocations in a collocation box immediately below the definition of a word (Figure 1). LDOCE users do not have to scroll down to see the collocation boxes.

Second, the LDOCE provides explanations for collocations that carry specific (idiomatic) connotations. If one collocation has two or more meanings, the dictionary provides users with short explanations to offer a clue for ease of differentiation. For example, golden is listed as an adjective collocate for opportunity in the MCD and LDOCE dictionaries; however, LDOCE defines golden opportunity in parentheses (a very good opportunity). The LDOCE not only gives collocation choices, but also specifies what certain word combinations mean.

Third, the LDOCE provides its users with example sentences that contain collocations (Figure 2). Some collocations in example sentences are in boldface or italicized so that collocations stand out; learners are able to easily find
collocations by reading example sentences, especially in cases where a collocation box is not provided for a word.

Another freely available corpus-based collocation tool is wordandphrase.info (WPI), which was developed and is currently maintained by a professor at Brigham Young University, Mark Davies. This tool is one of the Corpus of Contemporary American English (COCA’s) features. This website was included in the study because L2 writers may use this tool to generate adjective, noun, and verb collocations for words. With WPI, a learner can search for a word on this website; the link lists word definitions, collocations, parts of speech, and example sentences. Figure 3 illustrates the collocations for damage in WPI. On the left side of the figure, interested learners can find

Figure 1: A collocation box for opportunity in LDOCE.

Figure 2: Example sentence for opportunity and its collocates in LDOCE.

out about the use of a searched word in different registers, such as spoken, fiction, magazine, newspaper, and academic registers. On the right side, the website lists word meanings for *damage*. Below the definitions is a collocate section (collocates) for the target word that users may click on.

In WPI, the collocates are separated into groups by parts of speech: adjective (adj), noun, and verb. All the words generated by the website are clickable; that is, the words on the screen are hyperlinked to example sentences.

The third tool was the MCD. This is not an online tool; rather, it is a hard-copy collocation dictionary that was published in 2010. The dictionary has more than 4,500 keyword entries. The MCD does not indicate the exact number of collocations contained within it. What the MCD does indicate, however, is that the collocations within it were derived from a multi-million-word corpus, created with the use of cutting-edge technology, specifically, SketchEngine Software, developed and maintained by the director of Lexical Computing Ltd. (a corpus software and consultancy company in the United Kingdom).

This collocation dictionary has three features that justify its inclusion in this study. First, this dictionary was specifically designed for academically oriented learners of English who plan to pursue their degrees in English-speaking countries. Second, it was designed for upper-intermediate to advanced learners of English. Thus, the sample participants in the study reported here should be able to use the dictionary comfortably. Third, it lists collocations based on their connotations (see Figure 4).

According to Figure 4, in order to communicate *many* or *different aspects*, learners could use *different, many, several, various* before *aspect*. If learners plan to use *aspect* in a negative sense, they would find options such as *challenging, controversial, disturbing, negative, problematic, worrying*.

Most importantly for this study, and not related to the features of the above-mentioned collocation tools, no one had yet studied the use of the tools by L2 writers of English for producing appropriate collocations. This means that while lexicographers and applied linguists describe the features of LDOCE, WPI, and MCD as conducive to language learning and teaching (e.g. Canning 2014, Gao 2013, McGee 2012), there is still no evidence about their utility or effectiveness from a collocation learning and teaching standpoint. Even though WPI can be a useful collocation tool for learners of English, no
one had yet studied the use of WPI by L2 writers of English for producing appropriate collocations.

3.2.2 Instructional materials. The participants were taught how to use the three tools one at a time. Whenever new tools are incorporated into language teaching, learners should develop a comfort level using them (see Hubbard 2013 for a review). To help learners use the new tools effectively, the teacher-researcher developed instructional materials to train learners to use the tools. In this study, the instructional materials are divided into two types: practice activities and tool training.

During the practice activities, the students engaged in a variety of collocation exercises using one of the tools. The training activities were sequenced from...
word, sentence, and short paragraph to long-paragraph collocation exercises (see Appendix 1 for one set of practice activities). Throughout the activities, the participants read sentences, short paragraphs, consulted a tool, and replaced a miscollocation with a correct collocation. The target combinations in the practice activities were highlighted and the miscollocations were always in boldface, signaling to the participants that these words in boldface should be replaced with appropriate collocations. The practice activities for each tool took about 100 minutes (roughly two 60-minute classes).

Learners went through the following steps to be ready to use a tool. They watched a video tutorial for each tool; the video illustrated the tool on the computers in the classroom (classes were held in a computer lab). Immediately after the students had some idea about using the targeted tool, they were asked to complete the training activities and use the (designated) tool at the same time. By the time the learners finished all the training activities for each tool, learners should have been able to take the following steps using the tool:

- Search for a word in a tool;
- Select a collocate depending on the word’s part of speech;
- Scroll up or down (thumb through the pages for the MCD tool) to find a collocation box;
- Identify appropriate collocations in a collocation box;
- Scroll up or down (thumb through the pages for the MCD tool) to find example sentences;
- Identify appropriate collocations in example sentences; and
- Choose the collocation that is most relevant to a given context.

These tool-training instructional steps (identical for all three tools) were designed to help participants search for a word and find an appropriate collocation. Practice activities and tool training went hand in hand. During the tool training portion, learners were expected to learn how to use the tool to find collocations. During the practice activities, learners were expected to complete collocation exercises by using the tool. They were both used at the same time and supported each other. Learners were required to use a tool and find collocations in order to replace wrong collocations with correct collocations.

3.2.3 Instruments. Three data-collection instruments were utilized in the study: collocation tests, a Quality Review Checklist (Checklist will be used throughout the paper), and interview questions.

There were three forms of the collocation test. The test was a productive collocation test, using an essay format. The students were asked to read an essay and replace miscollocations with correct collocations. Specifically, it was a collocation correction test. Sixteen miscollocations (8 adjective + noun and 8 verb + noun) were embedded in the essay; that is, there were 16 items on the
test. The collocations were highlighted and the wrong collocates were marked in boldface (see Appendix 2 for Collocation Test #1). Participants were reminded that the words in boldface needed to be replaced with either correct verbs or adjectives. The nouns were stimulus (or base words), which means that the participants had to find appropriate verbs or adjectives for the nouns—not vice versa. The students had to write their answers on a separate sheet of paper (see Appendix 3 for Test Reporting Sheet #1). The collocations had to make sense, when corrected, in their given contexts. Participants were required to use the collocation tool (either online or hard copy) that they had been trained to use, but no other tools (e.g. Google translate, Merriam-Webster) while revising the miscollocations, even if they did not know the meaning of some words. Participants were given 30 minutes to complete the task.

The coefficient of internal consistency for all three tests was $\alpha = .70$. Because participants’ overall collocation scores were used in the analysis, internal consistency was in an acceptable range. Furthermore, teacher-generated tests are reported to be in the range of .60 and .80 (Subkoviak 1988).

The participants were asked to complete the Checklist after using each tool (see a checklist sample for LDOCE in Appendix 4). It was used to ascertain participants’ attitudes, opinions, and beliefs. More specifically, the checklist was used to better understand participants’ attitudes toward the tools in terms of ease of navigation and use, and whether the participants thought that the training helped them master the tools to locate collocations during the test. In addition to the Checklist, there was a follow-up interview session with only those students ($n = 18$) who demonstrated extreme cases in their responses to some of the items in the Checklist.

### 3.3. Study Design

A Latin Square Design was used in the study. There were three intact ESL classes, which were treated as three groups (Group 1, Group 2, Group 3). There were three sessions (Session One, Session Two, Session Three). There were three treatments referred to as “tools” (Tool 1 - LDOCE; Tool 2 - WPI; Tool 3 - MCD). Each group learned to use all three tools, but in a different order in each of three sessions. For example, the first group learned a new tool (LDOCE) in session one, the third tool (MCD) in session two, and the second tool (WPI) in session three. At the end of each session, participants were asked to take a test with 16 miscollocations, during which they consulted the tool that they had just been trained to use to correct the miscollocations. The tools and tests were counterbalanced among the three different groups to avoid any order, fatigue, or practice effects.
3.4. Data Analysis

Data collected from the participants included the produced collocations in the test reporting sheet (Appendix 3) and the responses in the Checklist (Appendix 4). The researcher checked the students’ collocations based on two criteria: first, the produced collocations had to be found in the COCA corpus and they needed to have a mutual information score of 0.1 or above; second, at least two out of three native speakers of American English had to approve the answers. One point was awarded if the participant wrote a correct collocation, and zero was given if the participant’s answer did not appear on the answer keys. Spelling mistakes or collocation instantiations (e.g. made, making, makes for make) were still awarded a score of 1. With regards to the Checklist data, participants’ answers were given a numerical value. For example, for the question The Macmillan Collocation Dictionary book was easy to use, the participant chose one of these assigned numbers: (Easy) 4, 3, 2, 1 (Difficult). The assigned numbers were scaled from 4 to 1.

In order to answer the first research question, the percentages of corrected collocations from each student’s tests were collected and entered into an SPSS file. The dependent variable represented the proportion of successful collocation corrections. The independent variables included tools, groups, and sessions. A repeated measures ANOVA for 3X3 Latin Square Design was used to examine the main effect of three factors: groups, sessions, and tools. The analyses used to answer the second research question are presented in the Results section.

4. Results

In order to examine the effectiveness of a tool on the collocation corrections, the researcher investigated the effect of tools, groups, and sessions on participants’ production of correct collocations. All participants (N = 45) took all three tests and received scores. Table 1 illustrates the total mean scores for the tools. The table shows that LDOCE and WPI had higher mean scores than MCD.

<table>
<thead>
<tr>
<th>Collocation Tools</th>
<th>LDOCE</th>
<th>MCD</th>
<th>WPI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10.69 (2.43)</td>
<td>8.44 (2.31)</td>
<td>10.58 (2.15)</td>
</tr>
</tbody>
</table>

*Note.* The maximum score was 16.
Using an alpha level of .05, a repeated measure analysis of variance was conducted to examine the effect of groups, sessions, and tools on collocation correction (see Table 2). Table 2 shows that there was no statistically significant difference among groups. There was no statistically significant difference among sessions either. However, there was a statistically significant difference among tools, $F(2, 128) = 13.79, p < .05$. To examine statistically significant differences among the tools, a post-hoc Tukey HSD test was run. The post-hoc Tukey HSD test showed that there was a statistically significant difference between MCD and LDOCE and MCD and WPI; however, no statistical difference was found between LDOCE and WPI. There was not a statistically significant difference among groups or sessions; however, there was a statistically significant difference among the tools.

The second research question asked, *What do ESL writers think of these three tools in terms of training, navigation, and helpfulness?* Three participants of 45 refused to participate in this phase of the study; thus, the remaining participants ($N = 42$) responded to the Checklist. The distribution of the data in the histograms, the skewness and kurtosis statistics, plus the results from the Shapiro-Wilk tests, confirmed that students’ attitudes toward tool training, navigation, and helpfulness were not normally distributed. Thus, nonparametric statistics were used in the subsequent analyses, using an alpha level of .05.

In order to examine whether there was a perceived difference in quality of tool training among the three tools, participants’ responses to items 1, 2, 3, and 4 in the Checklist were compiled. Responses were averaged to tap into students’ attitudes toward training. Internal consistency of the questionnaire items was examined by using Cronbach’s alpha ($\alpha$), yielding an acceptable reliability coefficient of .70. Descriptive statistics on students’ attitudes toward tool training shows the total mean scores for all the tools, as well as scores on the individual questions, were similar (Table 3).

Table 3 shows that participants’ attitudes toward tool training were comparable. A repeated measures comparison of means was performed using the Friedman test. There was no statistically significant difference in attitudes

<table>
<thead>
<tr>
<th>Variable and source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>15.61</td>
<td>2</td>
<td>7.80</td>
<td>1.47</td>
<td>.23</td>
</tr>
<tr>
<td>Session</td>
<td>5.38</td>
<td>2</td>
<td>2.70</td>
<td>0.50</td>
<td>.60</td>
</tr>
<tr>
<td>Tool</td>
<td>145.82</td>
<td>2</td>
<td>72.91</td>
<td>13.79</td>
<td>.00</td>
</tr>
<tr>
<td>Error</td>
<td>676.74</td>
<td>128</td>
<td>5.28</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: A Repeated Measures ANOVA for 3X3 Latin Square Design
toward tool training, $\chi^2(2, n = 42) = 1.143, p > 0.05$. Participants thought that tool training for all three tools was equally helpful.

To examine whether there was a perceived difference in quality of navigation among three tools, participants’ responses for items 5, 6, and 7 on the Checklist were compiled. Scores on items 5, 6, and 7 were averaged to tap into students’ attitudes toward tool navigation. Internal consistency of the questionnaire items was examined by using Cronbach’s alpha ($\alpha$), yielding an alpha coefficient of .68. Descriptive statistics on students’ perceived quality difference in terms of navigation is shown in Table 4. LDOCE had lower scores on average and for all items than the other two tools. The means and standard deviations for items 5, 6, and 7 indicate that the students thought that WPI and MCD were easier to use and navigate than LDOCE.

A repeated measures comparison of means was performed using the Friedman test. There was a statistically significant difference in students’ attitudes toward tool navigation $\chi^2(2, n = 42) = 10.67, p < 0.05$. To find out individual differences, post hoc analyses with Wilcoxon signed-rank tests were conducted with a Bonferroni correction applied, resulting in a significance level set at $p < 0.017$. There was a statistically significant difference in tool navigation between WPI and LDOCE ($Z = -3.289, p = 0.001$). Participants thought that the WPI was easier to navigate in search of collocations. There were no statistically significant differences between the MCD

Table 3: Means and standard deviations on attitudes toward tool training

<table>
<thead>
<tr>
<th>Quality Review Checklist Items</th>
<th>LDOCE $M$ (SD)</th>
<th>WPI $M$ (SD)</th>
<th>MCD $M$ (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  YouTube video was helpful to learn the tool features</td>
<td>3.73 (0.50)</td>
<td>3.71 (0.45)</td>
<td>3.70 (0.46)</td>
</tr>
<tr>
<td>2  YouTube video was helpful to complete the exercises</td>
<td>3.50 (0.63)</td>
<td>3.57 (0.63)</td>
<td>3.57 (0.70)</td>
</tr>
<tr>
<td>3  In-class practice activities were helpful to find collocations</td>
<td>3.66 (0.52)</td>
<td>3.88 (0.32)</td>
<td>3.88 (0.32)</td>
</tr>
<tr>
<td>4  In-class practice activities were helpful to fix collocations in the essay tests</td>
<td>3.60 (0.66)</td>
<td>3.61 (0.62)</td>
<td>3.80 (0.50)</td>
</tr>
<tr>
<td>Total</td>
<td>3.62 (0.42)</td>
<td>3.67 (0.38)</td>
<td>3.73 (0.39)</td>
</tr>
</tbody>
</table>

4 [Helpful] - 1 [Not Helpful]
and LDOCE ($Z = -1.521, p = 0.128$) or between the MCD and WPI ($Z = -1.595, p = 0.111$). Students thought that WPI was easier than LDOCE to navigate in search of collocations.

To investigate whether there was a perceived difference in quality of helpfulness among the three tools, participants’ responses for items 8, 9, 10, and 12 on the Checklist were compiled. Scores on items 8, 9, 10, and 12 were averaged to tap into their attitudes toward tool helpfulness. Internal consistency of the questionnaire items was examined by using Cronbach’s alpha ($\alpha$), yielding an acceptable alpha coefficient of .81. Descriptive statistics on students’ attitudes toward tool helpfulness is reported below.

First, WPI had higher mean scores for all four items in the Checklist than for LDOCE and MCD. Second, LDOCE has the lowest total mean score of three tools. Third, item 10 had the lowest mean scores for all the tools, whereas the other questionnaire items (8, 9, 12) had means above 3. A repeated measures comparison of means was performed using the Friedman test. There was a statistically significant difference in students’ attitudes toward tool helpfulness ($\chi^2(2, n = 42) = 7.26, p < 0.05$). To find out individual differences, post hoc analyses with Wilcoxon signed-rank tests were conducted with a Bonferroni correction applied, resulting in a significance level set at $p < 0.017$. There was a statistically significant difference in tool helpfulness between WPI and LDOCE ($Z = -2.43, p = 0.015$). Participants thought that WPI was more helpful than LDOCE for fixing collocation errors. There were no significant differences between the MCD and LDOCE ($Z = -1.00, p = 0.32$) or between the MCD

<table>
<thead>
<tr>
<th>Quality Review Checklist Items</th>
<th>LDOCE</th>
<th>WPI</th>
<th>MCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 The collocation tool was easy to use. *</td>
<td>3.31 (1.00)</td>
<td>3.69 (0.64)</td>
<td>3.52 (0.71)</td>
</tr>
<tr>
<td>6 The collocation tool was difficult to navigate to look for correct collocations. *</td>
<td>2.98 (1.00)</td>
<td>3.52 (0.67)</td>
<td>3.36 (0.73)</td>
</tr>
<tr>
<td>7 I was frustrated when I used the collocation tool. **</td>
<td>3.14 (0.95)</td>
<td>3.64 (0.58)</td>
<td>3.48 (0.63)</td>
</tr>
<tr>
<td>Total</td>
<td>3.14 (0.80)</td>
<td>3.62 (0.49)</td>
<td>3.45 (0.54)</td>
</tr>
</tbody>
</table>

*4 [Easy] - 1 [Difficult] order of responses reversed from 5 and 6 **4 [Not Frustrated] - 1 [Frustrated];

and LDOCE ($Z = -1.521, p = 0.128$) or between the MCD and WPI ($Z = -1.595, p = 0.111$). Students thought that WPI was easier than LDOCE to navigate in search of collocations.
Students thought that WPI was more helpful than LDOCE for fixing collocation errors.

4.1. Students’ insights from the Checklist and Interviews

Qualitative results based on the Checklist and teacher-student interviews are reported in this section. The results from the questionnaire and interviews combine to provide insights into the reasons that led students to answer as they did on the questionnaire and in the interview. The summaries of students’ responses on the questionnaire, as well as insightful interview comments for each tool, are reported below.

4.1.1 Wordandphrase.info (WPI). Most participants believed that WPI helped them find correct collocations and were certain (33 out of 42) that they would use the tool again. Participants who planned to use WPI in the future thought that WPI was easy to use and helpful for finding correct collocations. They believed that miscollocations in the tests were easily fixed when they used WPI. Some of these students pointed out that WPI could be helpful for international students, especially in their writing projects, because WPI helped them generate collocations for words with a click of a “search” button (on the website). Also, one student pointed out that this website could be helpful when a teacher was not available.

A few participants (7 out of 42) expressed concerns about the WPI and explained why they were unlikely to use WPI in the future. These participants pointed out that WPI could generate possible collocations, but they were still not sure which of the generated collocations to choose for their essays. Sometimes, they did not know which collocation type to choose (e.g. verbs, nouns, adjectives) and did not know the meaning of the listed collocations. In addition, participants were concerned about the technological aspects of the tool. WPI requires a log-in and requires three steps to reach the page that a learner may use to search for collocations (i.e. type wordandphrase.info, click...
In sum, some common themes from students’ responses from the interviews and questionnaire emerged. Generally, they reported that WPI was easy to navigate and helpful to find collocations as long as they used a noun to search for possible adjective and verb collocates. They liked the format of the website because adjectives, nouns, and verbs were listed separately. A few students also pointed out that it was not convenient to log into the website. In addition, some of the generated collocations were unknown.

4.1.2 Macmillan collocation dictionary (MCD). Participants expressed both positive and negative comments about the prospect of using this tool in the future. Slightly more than half of the participants (24 out of 42) reported that they were sure to use the tool in the future. Participants expressed a willingness to use MCD because it helped them improve collocations in their writing and they thought that it would be helpful in their undergraduate-level writing course: ENG105 – Critical Reading and Writing in the University Community. The students also reported that MCD was useful in learning academic vocabulary, and that most collocations included definitions and meanings in their entries. Despite participants’ positive comments about MCD, there were 16 students who reported that they were not sure whether they would use MCD in the future, for two reasons. First, they thought that MCD contained too much unnecessary information; thus, they were often confused about which word/collocation to choose. Second, they believed that looking up a word in the MCD took them more time than LDOCE and WPI. They thought that using an electronic tool would help them find a word faster. Furthermore, they believed that online tools were practical for looking up collocations, and were accessible both in terms of price as well as availability in their home countries.

Overall, those students who favored the MCD pointed out that they strongly believed that MCD would improve their written collocations. They also believed that MCD would be useful for distinguishing among collocation types because the dictionary had sections for different collocation types: adjectives, verbs, prepositions, etc. In addition, some believed that it would help them improve their academic vocabulary. Those participants had probably noticed that MCD places an emphasis on the importance of words from the Academic Word List (AWL) (Coxhead 2000). The dictionary marks AWL words in red and some students probably noticed this particular feature. Despite the fact that some participants favored MCD, others did not find it helpful in general because they had to thumb through the dictionary pages; in actuality, they thought, especially while writing essays, this would not be practical. Further, they mentioned the need to carry the heavy dictionary to their

on WordAndPhrase from the corpus.byu.edu homepage, and click on Frequency List).
classes. Some participants pointed out that they might not use MCD due to its format and price (around $40 US as of Spring 2014).

4.1.3 *Longman dictionary of contemporary English (LDOCE).* With regard to LDOCE, more than half of the participants (28 out of 42) pointed out that the LDOCE could be helpful for their spelling. In addition, they believed that they might use LDOCE in the future because it might help them become familiar with the meanings or definitions of new words. However, one-third of the participants (14 out of 42) expressed some negative opinions about using LDOCE in the future. Two reasons were apparent why participants might not use LDOCE in the future. First, they thought that the website did not contain collocations for all the target words and they believed that it was difficult to search for collocations on the website due to its interface. Second, students found the advertisements on the LDOCE website distracting.

The students’ questionnaire and interview responses about the LDOCE revealed the following findings. LDOCE was helpful as long as the collocations were presented in a collocation box. The students did not like LDOCE if it did not generate a collocation box. They also thought that reading example sentences was not convenient. The students also pointed out that LDOCE was a good tool for learning new words. However, they also pointed out that some pop-up advertisements on LDOCE distracted them.

5. Discussion

The effect of the three collocation tools on the correction of miscollocations by L2 writers was examined. Miscollocations were placed in an essay and bolded; participants were asked to replace the miscollocations by writing appropriate collocations after consulting the target tool. The findings indicate that every time participants took a test, it was a tool that made the difference and which drove the test scores. Among the tools, the participants produced more correct collocations when they used LDOCE. The tool that resulted in the second most correct collocations was WPI. However, there was no statistically significant difference between the two. Participants produced fewest correct collocations when they used MCD – a book collocation dictionary.

These findings might have occurred for two reasons. First, a dictionary format can be a factor in selecting correct collocation choices (*Nesi 2010*). LDOCE and WPI are online tools while MCD is a book. Searching for a correct collocation might be easier in an online platform. While using an online tool, a student simply has to type a word to find correct collocation options. However, when consulting a book, a student needs to thumb through the book pages to find collocations—possibly a lengthy process for many students. In the study reported here, participants produced more correct
collocations when they used online tools. Similar findings were found in a study by Dziemianko (2010), who concluded that paper-based dictionaries were good for general vocabulary learning, while online tools were effective for collocation production.

Second, the fact that WPI and LDOCE list fewer collocations might help dictionary users retrieve more accurate choices from the tools. Both WPI and LDOCE do not only present fewer collocations, but they also give the most frequent collocation choices to users. For example, WPI includes the most frequent collocations generated by the COCA corpus, while LDOCE presents the most frequent and useful collocations because its primary users are L2 learners and LDOCE is known to be a *learner dictionary* (see Ranalli and Nurmukhamedov 2014). Despite the fact that MCD has also been designed for learners of English and it lists more collocation options than WPI and LDOCE, it is nevertheless surprising why the usage of MCD resulted in fewer collocation answers in students’ collocation production. One plausible reason could be that MCD lists so many collocations for each entry, which could lead participants to produce inappropriate answers because they might have been puzzled about which collocation to select from. For example, MCD lists around 70 adjectives that collocate with *aspect*, while WPI and LDOCE each list 10 and 4 adjectives, respectively. Including 70 adjective collocates for a single word is definitely a luxury, but too many options might also baffle students, resulting in confusion in their collocation selection. Komuro (2009) reported that her participants complained that a book collocation dictionary (Oxford Colocations Dictionary) had too many collocation choices for each entry and some were synonymous. Thus, participants experienced difficulty in understanding the nuances of the collocates.

5.1. *Attitudes towards tool training*

The findings about students’ attitudes toward tool training indicate that there was no statistically significant difference in participants’ attitudes toward tool training. If statistically significant differences had been found in students’ attitudes toward tool training, it would have meant that they perceived differences in the training received for each tool. Such a finding would have been a threat to the internal validity of the study. Another reason for their attitude toward tool training was that the participants were trained in how to use the tools and they were generally glad to receive formal tool training. Training can be a one-shot introductory session or even stretched to multiple 10-minute sessions, lasting for four months (Hubbard 2005). In the present study, the participants spent about 75 minutes in training for each tool in the space of three consecutive sessions. Because the training for each tool followed the same procedures and the training activities all happened under the teacher-researcher’s supervision, students’ attitudes did not differ regarding training. In
sum, systematic training encompassing form-focused activities seems to be essential in tool-mediated collocation instruction, especially for dictionary reference skills.

5.2. **Issues of navigation and helpfulness of collocation dictionaries by L2 writers.**

The study has clearly suggested that tool navigation is a factor that can affect students’ attitudes toward a tool. The findings from the questionnaire clearly indicate that participants favored the WPI’s navigation because it had a what-you-see-is-what-you-get interface—different from MCD and LDOCE dictionaries. In addition to navigation, WPI was perceived to be more helpful than the other two collocation tools, LDOCE and MCD, in finding collocations. Possible reasons could be that WPI listed collocation choices according to their parts of speech. In addition, the grammatical categories (e.g. verb, adjective, noun) were easy to notice because they were in boldface. Since students had to supply verb and adjective collocations in classroom exercises and on tests, boldfaced collocation categories were probably visually easy to capture. Furthermore, students’ positive attitudes toward WPI may also have led them to perform better on the test. It is hypothesized that learners’ willingness to use a dictionary might be very much affected by its format (Nesi 2010). The participants might have preferred WPI’s format, which could have led them to use the WPI more effectively.

LDOCE was rated as the least preferred dictionary in terms of navigation and helpfulness among the three tools. However, L2 writers made more collocation corrections when they used online tools, namely LDOCE and WPI. It is interesting to note that students’ attitudes toward LDOCE regarding helpfulness and their actual performance during the collocation tests contradict each other. Participants might have thought of LDOCE negatively because LDOCE was not a collocation dictionary; rather, it was a learner dictionary with collocations presented in special boxes or example sentences. Unlike WPI and MCD, in LDOCE, some collocations were listed in collocation boxes while others were available only in example sentences. Thus, finding a plausible collocation in LDOCE was not necessarily an easy process; a student had to type a key word, find the correct part of speech, read the definition(s), and pay attention to the lists of collocations in the collocation box. If a collocation box was not provided for the key word, the student had to read an example sentence(s), and then determine whether the example sentence(s) contained a plausible collocation choice or not. Browsing through an example sentence(s) obviously required reading. Some students might not have opted to read example sentences in search of collocations due to factors such as time, laziness or fatigue. It is also evident that some learners do not pay attention to collocations in example sentences (Laufer 2011).
6. Limitations

The study has limitations: only two of them will be addressed. First, it was assumed that learners had understood the content of the essay-format collocation test. It is possible that learners did not read through the text. Another scenario is that they might have read the text but failed to understand some of it. To help participants understand the text, the researcher should have added around five to seven reading comprehension questions at the end of the text. Before participants revised miscollocations, they should have answered the comprehension questions. This would have ensured the teacher-researcher that participants had comprehended most of the text. It might have contributed to more successful collocation corrections. Second, it was assumed that learners used the tool when they revised miscollocations in the essay-format collocation tests. There was no control for whether or not participants used one of the designated tools during the task. The teacher-researcher walked around the classroom to encourage participants to take advantage of the tools. It is quite possible that participants did not take advantage of the tool(s) to revise some miscollocations; instead, they might have simply opted to use their background knowledge. To address this issue, researchers can ask participants to indicate on a piece of paper whether they have used a tool to replace miscollocations or have used screen recording software to record how or to what extent they have used online collocation tools to revise miscollocations (see Ranalli 2013 for discussion). Researchers might also consider doing think-aloud protocol sessions to gain better insights whether students actually take advantage of a tool during the task.

7. Concluding remarks

Online collocation tools were more effective in making successful collocation corrections than was the book collocation dictionary. The students obtained higher scores when they used the online tools, namely LDOCE and WPI. This means that L2 writers benefitted more from LDOCE and WPI than MCD because the online collocation tools offered useful collocation choices for L2 writers, thereby meeting their productive collocation needs. Both WPI and LDOCE resulted in accurate collocation responses on the tests. When the participants used MCD, they made fewer accurate corrections than when consulting WPI, and their mean scores for MCD were lower than LDOCE. In sum, L2 writers, especially upper-intermediate to advanced learners, need to be aware of collocations resources. Even if collocations are explicitly taught through books and other materials, L2 writers will not be exposed to all the useful collocations that the English language offers. These writers might eventually forget nouns that require verbs, adjectives, nouns, and prepositions.
Acknowledgment

I am grateful for the support of the Macmillan Publishing Company and AZ-TESOL, which helped to purchase the MCD dictionaries for this project. In addition, I would like to thank the student participants and administrators of the Program in Intensive English at Northern Arizona University. Also, I am indebted to my committee members, William Grabe, Joan Jamieson, Fredricka Stoller and Randall Sadler, for their constructive and supportive supervision. Special thanks go to three anonymous reviewers for their incisive feedback on the earlier drafts of this manuscript.

Notes

1 The test items on the tests were wrong/awkward collocations (miscollocations). The test items were derived from two sources. First, the researcher identified miscollocations from students’ essays written during previous semesters. Second, the researcher devised wrong/awkward verb or adjective collocates based on his background knowledge and sample miscollocations identified in early studies (e.g., Fan, 2009; Laufer, 2011). A wrong collocate was selected for the noun. For example, the following collocations, make a decision and widespread belief, are correct collocations. The researcher chose an incorrect verb, solve, for decision (solve a decision) and an incorrect collocate, long for belief (long belief). These miscollocations were checked using the MI score feature of the COCA corpus. The items embedded in the tests were found to have negative MI scores. There is a lexical repulsion (Renouf & Banerjee, 2007) between these words, that is, these words do not demonstrate any association. Negative MI scores meant that distracters had incorrect collocations. In addition, the list of miscollocations was checked using the combined intuition of two raters (native speakers of American English) who had MA TESL degrees from the USA and a minimum of 3 three years of teaching experience.

References

A. Dictionaries

B. Other literature


Appendix 1: Practice Activities

Exercise 1  Use the tool to find one verb collocation and one adjective collocation for each noun listed. The first example word, language, was done for you. The teacher will demonstrate the strategies he used to find the collocations for language.

Example:

<table>
<thead>
<tr>
<th>Noun</th>
<th>Verb</th>
<th>Adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>language</td>
<td>speak</td>
<td>foreign</td>
</tr>
</tbody>
</table>

1. child 2. argument 3. project

Exercise 2  Use the tool to fix the wrong/awkward collocations (bolded) in the sentences. Write the correct collocation inside the brackets. One example was done for you.

Pay attention to parts of speech and collocation meaning(s).

Example: She answers her responsibility as a nurse very seriously. [answer: takes]
1. The scandal is expected to **throw** the headlines tomorrow.  
   [answer: _______________]

2. Harry is planning to study law at the university, but he may **differ** his mind.  
   [answer: _______________]

3. The **high** cause of the problem was an oil leak  
   [answer: _______________]

4. Do you have time for a **tiny** chat about the composition class?  
   [answer: _______________]

**Exercise 3** Read the two short paragraphs and use the tool to fix the wrong/awkward collocations (bolded). Write down your answers in the *Revised Collocations* box.

Pay attention to **parts of speech** and **collocation meaning(s)**.

**A. Bella’s Job**

Bella has a job as a personal assistant. Basically her role is to (1) **give** charge of her boss’s schedule, who is not a very organized person, and make sure nothing goes wrong. She schedules appointments for her boss and she makes sure that he keeps his appointments. When her boss has to travel, she (2) **does** reservations for him. This month, she has a really (3) **strong** workload.

<table>
<thead>
<tr>
<th>WRONG Collocations</th>
<th>REVISED Collocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>give charge</td>
</tr>
<tr>
<td>2.</td>
<td>does reservations</td>
</tr>
<tr>
<td>3.</td>
<td>strong workload</td>
</tr>
</tbody>
</table>

**B. Henry’s Job**

Over the years, Henry has (1) **bought** the respect of his colleagues, and now, as he retires, we all hope he can enjoy the fruits of his many years of hard work. His career has been a (2) **nice** success, and he has (3) **done** enormous contributions to our profession. Thank you from all of us.

<table>
<thead>
<tr>
<th>WRONG Collocations</th>
<th>REVISED Collocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>bought the respect</td>
</tr>
<tr>
<td>2.</td>
<td>nice success</td>
</tr>
<tr>
<td>3.</td>
<td>done ... contributions</td>
</tr>
</tbody>
</table>
Exercise 4 What is the best and most efficient way to travel? This short essay will teach you how to travel without using a lot of money. There are 6 bolded wrong/awkward collocations (3 verbs and 3 adjectives) in the paragraphs below. Use the tool to fix these problems. Write down your answers in the Revised Collocations box.

Pay attention to parts of speech and collocation meaning(s).

Do you think you cannot travel because you are on a (1) closed budget? It is certainly possible to travel cheaply, but you need to use the Internet to carry out some basic research first. There are thousands of sites providing a wealth of information on budget travel, and you will find all sorts of (2) kind hints on how to have a great time without spending too much money. Even better, if you know someone who has been to the area you are interested in, talk to him or her. They may be able to (3) do recommendations about places to stay and things to do.

If you plan to travel somewhere very remote, it is best to (4) set advice from someone who knows the area well. If you need any (5) wealthy information, online message boards can be very useful. Some travel agents can (6) write guidance on specialist holidays such as wildlife or archeological tours. Agents will help you to make an informed decision about the best ones to choose.

<table>
<thead>
<tr>
<th>WRONG Collocations</th>
<th>REVISED Collocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. closed budget</td>
<td></td>
</tr>
<tr>
<td>2. kind hints</td>
<td></td>
</tr>
<tr>
<td>3. do recommendations</td>
<td></td>
</tr>
<tr>
<td>4. set advice</td>
<td></td>
</tr>
<tr>
<td>5. wealthy information</td>
<td></td>
</tr>
<tr>
<td>6. write guidance</td>
<td></td>
</tr>
</tbody>
</table>

Appendix 2: COLLOCATION TEST #1

Directions

The essay below discusses the advantages of studying in a foreign country. These advantages are as follows: learn a second language, become an independent person, and make many friends.

There are 16 bolded wrong/awkward collocations in the paragraphs below: 8 verb + noun collocations and 8 adjective + noun collocations. Use the collocation tool to fix these problems. Write down your answers in the Revised Collocations box in the Test Reporting Sheet.
Keep in mind the following strategies while looking for collocations:

(1) Read **collocation boxes** and **example sentences** to find collocations.
(2) Pay attention to the parts of speech (**verb** or **adjective**).
(3) Pay attention to the **meaning** of the collocations that you find.

---

Start the test

You have **30 minutes** to complete the test

---

Not all people have the chance to study in another country. When students in Kuwait finish high school, they need to (1) **solve** a decision: what should I do next? Most of them decide to go abroad to study because they believe that study abroad could have a (2) **fantastic** role in their future career. In addition, most parents believe that study abroad can have a (3) **nice** impact on their children. Both students and their parents strongly believe that study abroad experiences (4) **arrange** a student’s future. In my opinion, there are many other reasons why studying in a foreign country could be important.

First, study abroad is a (5) **cool** chance to learn a second language. Everybody in the environment speaks this language; thus, this could be the most (6) **awesome** method to improve your second language skills. You need to read, write, listen, and speak a foreign language in order to survive in a new environment. For instance, I am studying in the United States now. During my first two weeks, I had (7) **heavy** difficulty in understanding when I talked to native speakers of English. Because I started taking English classes, I was able to (8) **lift** English skills. That is why I strongly believe that study abroad is the best way to learn a foreign language.

Second, students can (9) **raise** experience and become more independent. There is a (10) **long** belief that a person who studies abroad will learn about himself. Study abroad will definitely (11) **draw** your horizon. While living abroad, a student will learn about his/her traditional, cultural, and religious values, and be able to strengthen these values. In addition, it can teach us how to be responsible. Before I came to the United States, I could not do anything without my father; he helped me with everything. However, since I came here, I decided to (12) **catch** responsibility for my everyday life. At the beginning, it was so hard, but I gradually got used to it.

Third, you will make many friends from all over the world. When I studied at San Diego State University, I met people from Turkey, China, France, and Sweden; they all became my friends. In the (13) **close** future, my friend from Turkey and I are planning to (14) **fly** a business together. In US universities, you will also meet and talk with some of the greatest scientists in the world. Meeting and talking to these scientists can be a (15) **lonely** opportunity in your
life. Study abroad can give the person memorable experiences. I strongly believe that study abroad will help you (16) earn your goal.

Appendix 3: TEST REPORTING SHEET #1

<table>
<thead>
<tr>
<th>#</th>
<th>WRONG collocations</th>
<th>REVISED collocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>solve decision</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>fantastic role</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>nice impact</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>arrange future</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>cool chance</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>awesome method</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>heavy difficulty</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>lift skills</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>raise experience</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>long belief</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>draw horizon</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>catch responsibility</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>close future</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>fly a business</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>lonely opportunity</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>earn goal</td>
<td></td>
</tr>
</tbody>
</table>

Appendix 4: Quality Review Checklist for Longman Dictionary of Contemporary English

Directions: Please respond by CIRCLING or WRITING the most appropriate answer. There are no right or wrong answers. Be honest about your experience.

1. The information in the YouTube video tutorial helped me understand the Longman Dictionary of Contemporary English website.

   |   |
   | 4 3 2 1 |
   | Helpful Not Helpful |
2. The YouTube video helped me finish the in-class practice activities.

Helpful 3 2 1
Not Helpful

3. The in-class practice activities helped me learn how to find collocations using the Longman Dictionary of Contemporary English.

Helpful 3 2 1
Not Helpful

4. The in-class practice activities were helpful because they taught me how to fix wrong collocations using the Longman Dictionary of Contemporary English.

Helpful 3 2 1
Not Helpful

5. The Longman Dictionary of Contemporary English website was easy to use.

Easy 3 2 1
Difficult

6. The Longman Dictionary of Contemporary English website was difficult to navigate (search, find) to look for correct collocations?

Easy 3 2 1
Difficult

7. I was frustrated when I used the Longman Dictionary of Contemporary English website.

Not Frustrated 3 2 1
Very Frustrated

8. The Longman Dictionary of Contemporary English website helped me fix collocation errors in my essay.

Very Helpful 3 2 1
Not Helpful

see other side →
9. The Longman Dictionary of Contemporary English website was **always** helpful because I **found correct collocations** when I searched a word.

   4  Always  3  Not Always  2  1

10. In the future, I am **sure** that I will use the **Longman Dictionary of Contemporary English website**.

   4  Sure  3  Not Sure  2  1

11. Based on your response to question 10, please write your reason(s) from one to three sentences below.

   **Sure. Why?**
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

   **Not Sure. Why not?**
   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________

12. I am **sure** that I will recommend the **Longman Dictionary of Contemporary English website** to my friend.

   4  Sure  3  Not Sure  2  1