
Received: 04.06.2020
Received in revised form: 11.06.2020
Accepted: 19.06.2020

**ALTERNATIVE VOCABULARY ASSESSMENT: USING CONCORDANCE LINE ACTIVITIES FOR TESTING LEXICAL KNOWLEDGE**

*Research Article*

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Abstract
The last decade has witnessed a strong impact of emerging technologies on language pedagogy due to the developments in the computer technologies. The use of authentic linguistic examples through corpora and concordance based activities is defined as data-driven learning and it exposes the students to examples of more realistic language than invented or artificial examples. Therefore, this experimental study aimed to investigate the effectiveness of the use of a concordance software and concordance lines as a pedagogical tool in vocabulary assessment at a state university in Turkey in 2015 academic year. The materials used in the study were specialized corpora, a concordance software and treatment handouts. The corpora were analyzed by means of AntConc 3.2.4w. An independent samples T-test, was conducted over the students’ GPAs, MANOVA and Standard Multiple Regression Analysis were conducted to see whether experimental and control groups were equivalent in terms of the knowledge of target vocabulary items. Thirdly, Independent Samples T-test for the three semi-controlled paragraph writing assessment and lastly descriptive statistics of the student questionnaire were administered. By the use of computer-generated concordances in the classroom, students explored regularities of patterning in L2. Corpus-based DDL is a great alternative since it emphasizes the exploration and discovery of learning process. By integrating technology into curricular programs, the lust of digital natives for hands-on learning is satisfied as well.

Key words: corpus-based approach; concordance lines; vocabulary instruction; data-driven learning.

1. Introduction

During the process of acquiring a foreign language learners are exposed to substantial vocabulary instruction. Since mistakes, misjudgments, miscalculations and erroneous assumptions form an important aspect of vocabulary learning on behalf of students, instructors tend to use traditional methodologies to convey meaning correctly and to teach vocabulary more efficiently. And this, in turn, indicates boredom and low motivation in terms of learners. Because of the popularization of computers, corpus-based research has become prevalent in recent years. With current advance merits in computers used in linguistics, the powerful ability of storage and processing offers a new way of language pedagogy, which gives language researchers the rare opportunity to further contemplate those linguistic meanings in an authentic environment. Students can easily gain access to a huge number of authentic and sorted language examples through concordances. However, the inadequacy of solid and empirical data undermines the argument that DDL has positive effects on language teaching and learning.
Apart from being employed in the compilation of corpus-based dictionaries, books and syllabuses, concordances can also be utilized directly in the classroom. Therefore, this study aimed to investigate the effectiveness of the use of a concordance software and concordance lines as a pedagogical tool to learn the target vocabulary of a text book. The purpose of the study was to compare the effects of corpus-aided vocabulary instruction with traditional vocabulary teaching methods. This study also examined the extent to which students used the target vocabulary in paragraph writing exercises. Hence, this study reports on a two-way assessment alternative to traditional classroom assessment. By integrating technology into curricular programs, the lust of digital natives for hands-on learning can be satisfied as well.

2. Research Questions

1) To what extent does the use of concordance lines to teach vocabulary improve students’ performance on vocabulary tests using controlled exercises compared to the performance of students who have been taught these vocabulary items in class using text book materials?

2) To what extent does the use of concordance lines to teach vocabulary lead to students’ greater use of these vocabulary items in less controlled paragraph writing exercises?

3) How do the students in the experimental group perceive the use of concordance lines as a tool for learning vocabulary?

3. Literature Review

There are two common pedagogical applications of corpora in EFL teaching and learning: indirect and direct applications. Indirect applications include researchers and teachers consulting corpora to inform curriculum and materials development, and may lead to authentic examples of language for textbooks rather than invented examples. Direct applications of corpora in language teaching and learning, on the other hand, typically involve learners accessing a corpus directly (Römer, 2011). Whatever definition is given the novel corpus technology presents many opportunities to find innovative ways in the teaching and learning of languages. Different kinds of corpora help enhance the teaching of languages by means of representative examples from the realistic content. While in traditional teaching fashion a rule is formulated, in the light of the new evidence exceptions to the rule can be formulated. Representative corpora which can be considered as an out-runner of extensive reading offer intensive exposure to language patterns. Through corpora learners experience various types of texts that they might not prefer to read outside class. This data-driven and awareness-raising approach is a good source for variety in the language classroom. It compensates for the intuition that non-native speakers do lack. It is a useful tool for learners to discern the subtleties of language and detect the nuances of language items. By allowing learners to understand how native speakers use the language, it helps them develop inductive reasoning skills. It is also possible for teachers and learners to have access to corpora by themselves. It helps students to become better language learners outside the classroom (Johns, 1991a, p. 31) by encouraging noticing and consciousness-raising, leading to greater autonomy and better language learning skills in the long term. When provided with plenty of examples and good models in the corpus as shown in many scholarly articles, students learn to take responsibility of their learning. Moreover, this hands-on learning opportunity has the potential to help learners in Vygotsky’s terms (1978) develop their zone of proximal development. Johns (1991a) himself defines data-driven learning (DDL) as “the attempt to cut out the middleman as far as possible and to give the learner direct access to the data” (p. 30). DDL is the application of concordancing in language learning, and learners exploit corpora by using concordancing while dealing with a
language phenomenon (Payne, 2008). In other words, learners are not taught overt rules, but they explore corpora to detect patterns among multiple language samples (Boulton, 2010). This type of analysis represents a far more “natural” approach, as learners are using adaptive behavior in detecting regular patterns in the data that are meaningful to them, rather than attempting to learn and apply rules they are given, a more “artificial” intellectual activity (Gaskell & Cobb, 2004, p. 304; Scott & Tribble, 2006, p. 6). The combination of corpora and concordancers shows that a promising future in the field of language teaching and learning is offered to language teachers and researchers by letting learners discover specific patterns and change their minds by observing extensive naturally occurring examples in real texts (Hill, 2000). Under the light of these findings, this study tried to create an incidental learning environment in a DDL design through direct access to the implementation of concordancing by students.

4. Methodology

Eighty-two students from four intermediate level EFL classes at a Turkish state university preparatory school (Karadeniz Technical University) participated in the study in the 2014-2015 academic year. The data were collected through the administration of a pre-test, an immediate post-test, a delayed post-test, and a student questionnaire. The testing instruments and the questionnaire were created by the researcher. Since the questionnaire was designed to explore how the experimental group student perceive the use of concordance lines as a tool for learning vocabulary, no reliability test was conducted on the questionnaire. The materials used in the study were specialized corpora, a concordance software and treatment handouts. The corpora and treatment handouts were created by the researcher as well. The corpora were analyzed by means of AntConc 3.2.4w concordance software during the treatment (Anthony, 2014). In this quasi-experimental study, the regular activities in the text book were replaced with corpus-aided activities for the experimental group. The specialized pedagogical corpora created by the researcher were used as a resource by the students via AntConc 3.2.4w concordance software in the computer laboratory for three-weeks long with an aim of learning the target vocabulary items. After the creation of the specialized corpora, three different handouts were created by the researcher to be used during the treatment in the computer laboratory for the study. With the help of the handouts students were asked to analyze the concordance lines using the software. After the students in the experimental group analyzed the concordance lines on the screen, they were asked to do vocabulary practice exercises on the handouts which required them to demonstrate their knowledge of meaning, form and use of the vocabulary items as well as different parts of speech and grammar structures such as modals, verb tenses or relative clauses. Three different writing assignments were prepared by the researcher. The assignments required students to use the target vocabulary in a written context with an aim to understand whether the students can transfer their lexical knowledge to writing as a productive skill. After the students received instruction, the students in both groups were asked to write paragraphs which included the vocabulary they learned that week. The writing topics were adapted from the text book with minor changes to make them more appropriate to the students’ interests. In an attempt to investigate the third research question, the students in the experimental group were asked to complete a questionnaire after the three-week treatment with an aim to explore the perception of the students in the experimental group towards the utility of concordance lines in vocabulary learning. The questionnaire was given to the students immediately after they took the immediate post-test in order to gather the data when the students’ minds were still fresh. The questionnaire was in a 5-point Likert Scale format and consisted of 12 items.
5. Data Analysis

The study consisted of a 4-step quantitative data analysis. In the analysis of the tests, SPSS was used. Before the treatment began, as the first step of the data analysis, 1st term grade point averages of four intermediate classes were analyzed. An independent samples T-test, was conducted over the students’ GPAs in order to make sure that the students in the experimental group and the control group were at the same English proficiency level when the treatment began. After it was set clear that both groups were at the same level, the treatment began and the vocabulary tests were implemented successfully. The second step of the data analysis was a quantitative analysis of the test scores of the students. MANOVA was conducted for the pretest, post-test, and delayed post-test scores of the students in the experimental group and the control group. This test sought to determine whether the experimental group and control group act differently in their pre, post and delayed post-test English scores and whether the students’ performance increased with the treatment or not and also whether they retained their knowledge. And regression was conducted to reveal the relationship between the 1st term English scores of the participants and vocabulary scores to test whether their previous knowledge can predict their knowledge of target vocabulary items. Thirdly, the paragraph writing achievement of the students in both groups were compared with T-test statistics. The fourth and last step of the data analysis was the analysis of the student questionnaire. In order to answer the third research question, the frequencies of the items and the perception of the students as to the use of concordance lines in vocabulary learning were explored.

Comparison of 1st Term Grade Point Averages between Experimental and Control Group

In the experimental and control group, the 1st term GPA scores of 82 students in total were calculated.

Table 1. 1st Term GPA Descriptives, All Groups

<table>
<thead>
<tr>
<th>groups</th>
<th>Valid</th>
<th>Missing</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>experimental</td>
<td>41</td>
<td>0</td>
<td>78.24</td>
<td>40.00</td>
<td>95.00</td>
</tr>
<tr>
<td>control</td>
<td>41</td>
<td>0</td>
<td>80.34</td>
<td>68.00</td>
<td>93.00</td>
</tr>
</tbody>
</table>

According to Table 1, in the experimental group the highest score is 95, the lowest score is 40, and the mean is 78.24. In the control group the highest score is 93, the lowest score is 68, and the mean is 80.34. When the scores of the students in both groups are considered, it can be stated that the scores’ values are not particularly different from each other. The control group has only 2 points more average when compared to the experimental group.

Table 2. 1st Term GPA Independent Samples T-test, All Groups

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>T-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An independent samples T-test was conducted in order to measure whether there was a difference between both groups in terms of GPA scores. As could be understood from the significance value in Table 2 \((p = .28)\), there is no difference between the experimental group and the control group in terms of their first term test scores.

**MANOVA: Comparison of Vocabulary Knowledge between Experimental and Control Group**

Table 3. MANOVA (Pre-test, Post-test and Delayed Post-test Scores) in Control and Experimental Groups

<table>
<thead>
<tr>
<th></th>
<th>Control Group</th>
<th>Experimental Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Pre-test</td>
<td>43.85</td>
<td>13.98</td>
</tr>
<tr>
<td>Post-test</td>
<td>57.26</td>
<td>17.47</td>
</tr>
<tr>
<td>Delayed Post-test</td>
<td>60.68</td>
<td>17.70</td>
</tr>
</tbody>
</table>

A multivariate analysis of variance (MANOVA) identified a significant treatment effect on the achievement of the participants’ in their pre-test, post-test and delayed post-test scores. Using Wilk’s Lambda statistics, a significant main effect of treatment was found \((\Lambda = 1.000, F= 1384.435, p < .000)\), with a large effect size \((\text{partial eta squared} = .996)\).

Group differences on treatment factor had statistical significance (in order of size of F values): Pre-test \((\text{Experimental} = 43.85; \text{Control} = 32.92; F = 403.055; p = .000; \text{eta squared} = .883)\); Post-test \((\text{Experimental} = 87.41; \text{Control} = 57.26; F = 440.149; p = .000; \text{eta squared} = .989)\); Delayed Post-test \((\text{Experimental} = 86.07; \text{Control} = 60.68; F = 481.482; p = .000; \text{eta squared} = .994)\).

It was found that using concordance lines in learning the target vocabulary produced higher achievement when compared to using a text book in vocabulary learning.

**REGRESSION**

Table 4. Correlations between the participants’ 1st term English scores and their achievement in vocabulary tests

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st term</td>
<td>.102</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td></td>
<td>.133</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-test</td>
<td>.116</td>
<td></td>
<td>.312</td>
<td>.435</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Standard multiple regression was performed on 1st term English scores to predict the relationship to achievement in vocabulary tests. Preliminary analyses were conducted not to violate the assumptions of normality, linearity, multicolinearity and homosedasticity.
Table 5. Participants’ achievement in English

<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>t</td>
</tr>
<tr>
<td>Pre-test</td>
<td>-.245</td>
<td>-2.195</td>
</tr>
<tr>
<td>Post-test</td>
<td>.220</td>
<td>1.404</td>
</tr>
<tr>
<td>Delayed Post-test</td>
<td>-.164</td>
<td>-1.045</td>
</tr>
</tbody>
</table>

(R²=.086, Predictor: Pre-test)

Nevertheless, over the partial correlation between the independent variables; pre-test, post-test and delayed post-test only the pre-test (beta = -.245, p = .031) came about as significant predictor.

The Comparison of Corpus-Aided Vocabulary Instruction to Vocabulary Instruction with the Text Book in Less Controlled Paragraph Writing Exercises

Independent Samples T-test analysis was conducted for each writing exercise separately.

Table 6. First Writing Assignment Group Statistics

<table>
<thead>
<tr>
<th>groups</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>control</td>
<td>41</td>
<td>2.61</td>
<td>2.74</td>
<td>.42</td>
</tr>
<tr>
<td>experimental</td>
<td>41</td>
<td>6.46</td>
<td>.97</td>
<td>.15</td>
</tr>
</tbody>
</table>

The mean scores in Table 6 show that the control group’s success average is 2.61 while experimental group’s success average is 6.46 out of 8.

Table 7. First Writing Assignment Independent Samples T-test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>T-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>47.20</td>
</tr>
</tbody>
</table>

Table 7 demonstrates that (p = .00) there is a difference between both groups in terms of the first writing assignment scores. So, the experimental group is more successful than the control group in terms of the first writing assignment scores.
Table 8. Second Writing Assignment Group Statistics

<table>
<thead>
<tr>
<th>groups</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>control</td>
<td>41</td>
<td>3.10</td>
<td>2.39</td>
<td>.37</td>
</tr>
<tr>
<td>experimental</td>
<td>41</td>
<td>6.32</td>
<td>1.29</td>
<td>.20</td>
</tr>
</tbody>
</table>

The mean scores in Table 8 show that the control group’s success average is 3.10 while experimental group’s success average is 6.32.

Table 9. Second Writing Assignment Independent Samples T-test

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
<th>T-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>30.20</td>
</tr>
</tbody>
</table>

Table 9 demonstrates that \( p = .00 \) that there is a difference between both groups in terms of the second writing assignment scores. The experimental group is more successful than the control group in terms of the second writing assignment scores.

Table 10. Third Writing Assignment Group Statistics

<table>
<thead>
<tr>
<th>groups</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>control</td>
<td>41</td>
<td>3.68</td>
<td>2.46</td>
<td>.38</td>
</tr>
<tr>
<td>experimental</td>
<td>41</td>
<td>6.88</td>
<td>1.02</td>
<td>.16</td>
</tr>
</tbody>
</table>

The mean scores in Table 10 show that the control group’s success average is 3.68 while experimental group’s success average is 6.88.

Table 11. Third Writing Assignment Independent Samples T-test

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
<th>T-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>40.40</td>
</tr>
</tbody>
</table>
Table 11 demonstrates that \( p = .00 \) that there is a difference between both groups in terms of the third writing assignment scores. Again, the experimental group is more successful than the control group in terms of the third writing assignment scores.

### Table 12. All Writing Assignments Group Statistics

<table>
<thead>
<tr>
<th>groups</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>control</td>
<td>123</td>
<td>3.13</td>
<td>2.55</td>
<td>.23</td>
</tr>
<tr>
<td>experimental</td>
<td>123</td>
<td>6.55</td>
<td>1.12</td>
<td>.10</td>
</tr>
</tbody>
</table>

The control group’s general success average is 3.13 out of 8 and the experimental group’s success average is 6.55 out of 8.

### Table 13. All Writing Assignments Independent Samples T-test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>T-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>--------------</td>
<td>------</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>129.10</td>
</tr>
</tbody>
</table>

Table 13 demonstrates that the significance value \( p = .00 \) is lower than the error margin \( p < .05 \). So, the hypothesis is rejected. There is a difference in terms of success between both groups. The experimental group is more successful in transferring their lexical knowledge into written competence.

**QUESTIONNAIRE**

### Table 14. Descriptive Measures for the Student Questionnaire

<table>
<thead>
<tr>
<th>Q1 I think using concordance lines to do vocabulary practice exercises is easy.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Not Sure</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>f</td>
<td>-</td>
<td>1</td>
<td>3</td>
<td>19</td>
<td>18</td>
<td>41</td>
</tr>
<tr>
<td>%</td>
<td>-</td>
<td>2.4</td>
<td>7.3</td>
<td>46.3</td>
<td>43.9</td>
<td>100</td>
</tr>
<tr>
<td>Q2 I think using concordance lines to do vocabulary practice exercises is fun.</td>
<td>f</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>16</td>
<td>41</td>
</tr>
<tr>
<td>%</td>
<td>2.4</td>
<td>2.4</td>
<td>22.0</td>
<td>39.0</td>
<td>34.1</td>
<td>100</td>
</tr>
<tr>
<td>Q3 I think using concordance lines to do vocabulary practice exercises is an effective way to learn vocabulary.</td>
<td>f</td>
<td>10</td>
<td>6</td>
<td>5</td>
<td>18</td>
<td>41</td>
</tr>
<tr>
<td>%</td>
<td>24.4</td>
<td>14.6</td>
<td>12.2</td>
<td>43.9</td>
<td>49</td>
<td>100</td>
</tr>
<tr>
<td>Q4</td>
<td>I think using concordance lines to do vocabulary practice exercises is <strong>more difficult</strong> than learning vocabulary by using a text book.</td>
<td>f</td>
<td>14</td>
<td>10</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Q5</td>
<td>I think using concordance lines to do vocabulary practice exercises is <strong>more boring</strong> than learning vocabulary by using a text book.</td>
<td>f</td>
<td>14</td>
<td>12</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Q6</td>
<td>I think using concordance lines to do vocabulary practice exercises has increased my <strong>confidence</strong> about learning English vocabulary.</td>
<td>f</td>
<td>-</td>
<td>3</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Q7</td>
<td>I think concordance lines based vocabulary practice exercises can be used <strong>instead of</strong> exercises in the book to learn vocabulary.</td>
<td>f</td>
<td>-</td>
<td>4</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Q8</td>
<td>I think concordance lines based vocabulary practice exercises can be used to <strong>supplement</strong> exercises in the book to learn vocabulary.</td>
<td>f</td>
<td>-</td>
<td>1</td>
<td>4</td>
<td>23</td>
</tr>
<tr>
<td>Q9</td>
<td>I recommend that teachers should use concordance lines so as to teach vocabulary items in <strong>beginner level</strong> EFL classes.</td>
<td>f</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Q10</td>
<td>I recommend that teachers should use concordance lines so as to teach vocabulary items in <strong>intermediate level</strong> EFL classes.</td>
<td>f</td>
<td>-</td>
<td>3</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>Q11</td>
<td>I recommend that teachers should use concordance lines so as to teach vocabulary items in <strong>advanced level</strong> EFL classes.</td>
<td>f</td>
<td>-</td>
<td>3</td>
<td>7</td>
<td>10</td>
</tr>
</tbody>
</table>
Q12 I want to do some more exercises to learn English vocabulary items by using concordance lines.

<table>
<thead>
<tr>
<th></th>
<th>f</th>
<th>1</th>
<th>4</th>
<th>5</th>
<th>14</th>
<th>17</th>
<th>41</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td></td>
<td>2.4</td>
<td>9.8</td>
<td>12.2</td>
<td>34.1</td>
<td>41.5</td>
<td>100</td>
</tr>
</tbody>
</table>

The first two items required the students to directly specify their opinions regarding to what extent they found these concordance line activities for learning vocabulary easy and fun. The third item required the students to evaluate how effective they found using concordance lines in the learning of English vocabulary. Items 4 and 5 required the students to compare the use of concordance line activities with the use of text book in vocabulary learning in terms of their difficulty and boringness. Since these two items indicated negative opinions, the descriptive scores of the students were calculated by reversing these two items in SPSS analysis. Item 6 required the students to directly specify their opinions about whether using concordance lines to do vocabulary practice exercises increased their confidence in English vocabulary learning. Items 7 and 8 investigated whether the students’ would prefer to use concordance lines based vocabulary practice exercises instead of the text book or to supplement the text book. Items 9, 10, 11 were constructed in order to tap into the students’ recommendations about at which proficiency level (beginner-intermediate-advanced) the concordance line approach would be more appropriate to use in English vocabulary learning. The last and 12th item tried to figure out the eagerness of the students to do more exercises with the concordance lines.

6. Findings and Discussion

The findings of the current study confirm to the findings of the previous studies in the literature. The corpus-based activities in the present study which led the students to derive the lexical structures of target vocabulary items out of the examples in the concordance lines, it is never wrong to say that the present study has used an inductive approach in language instruction, similar to that of Chan & Liou (2005) in vocabulary and Weber (2001) in writing. In the current study, the students learned the target vocabulary items by means of a genuine teacher and a text book. The statistical analysis of the test results revealed that although the students in the control group had higher grade point averages before the study was initiated, experimental group students who were able to use the concordance line activities effectively in learning English vocabulary items were more successful and so was corpus-aided instruction compared to traditional vocabulary instruction method. The analysis of the student questionnaire showed that the students had positive perception about using concordance lines in learning English vocabulary. These findings have shown that there is a positive correlation between corpus consultation and achievement in vocabulary learning. As a matter of fact, this study via corpus consultation is essentially an updated version of “structured input” as stated by Van Patten (2007). The present study aims particularly to help learners develop “input processing” strategies that go beyond content lexis and attend to forms within a meaningful context. In line with Björkenstam (2013), corpus analysis presents quantitative and reusable data, and provides the opportunity to test and challenge language related ideas and intuitions. Hence, corpora plays an essential role in language learning. The students who get exposed to a pedagogical corpus by exemplifying the different parts of speech of the target vocabulary items through the concordance lines had the chance to discover specific patterns and in turn understand the descriptions of a language.

7. Conclusion
In this study by the use of computer-generated concordances in the classroom students explore regularities of patterning in the target language and the development of activities and exercises based on concordance output an alternative assessment method is suggested. Today, concordancers are invaluable learning tools and used increasingly in the language classroom owing to the emerging notion of data-driven learning. Since the concordance line activities in the handouts of the present study included different parts of speech exercises and sentence production activities besides understanding the meaning of the target vocabulary items, the students were provided with the opportunity for a guided-discovery learning atmosphere. More precisely, different vocabulary structures for the same vocabulary items facilitate students’ creativity and self-discovery learning by exposing them to various contexts via corpora. Students learn through problem solving activities rather than being instructed directly by the teacher. They come into contact with a large amount of authentic language data, but not prescriptive grammatical rules. Corpus-based data-driven learning is a great alternative since it emphasizes the exploration and discovery of learning process.

8. Conflict of interests

The author declares that there is no conflict of interest.

9. Ethics Committee Approval

The author confirms that the study does not need ethics committee approval according to the research integrity rules in their country.
References


APPENDIX A: Vocabulary Test

Time: 25 Mins

Name, Surname | Student Number | Signature
--- | --- | ---

PART A: Please complete the sentences with the correct vocabulary. (8x5=40 pts)

1. Our schools must continue to offer excellence in education and embrace new ………………… to enhance teaching and learning.
   a) documents
   b) technologies
   c) possibilities
   d) instructors
   e) references

2. Heisenberg, head of the Nazi nuclear reactor …………………, went to Copenhagen in 1941 to meet with Bohr.
   a) manager
   b) producer
   c) vendor
   d) program
   e) supervisor

3. The new air conditioner is helping to improve air ………………… with a cleaner, quieter engine.
   a) weather
   b) quality
   c) smell
   d) condition
   e) type

4. The floors throughout are the ………………… oak, sanded and stained a dark chocolate brown to hide their imperfections.
   a) unique
   b) earliest
   c) original
   d) magnificent
   e) new

5. After a long illness, getting fit again was a difficult………………………… with ups and downs.
   a) development
   b) method
   c) progress
   d) activity
   e) process

6. To start with, the first grade students seemed more ………………… with these plants than I would have expected.
   a) popular
   b) familiar
   c) interested
   d) outstanding
   e) lazy

7. The restoration will ………………… less than 24 hours and will involve less than 10 workers.
   a) last
   b) find
   c) taken
   d) during
   e) go

8. Research reveals that …………… which have a strong emotional content are more likely to succeed in convincing consumers to buy the product.
   a) advertisements
   b) statements
   c) notices
   d) announcements
   e) programs

PART B: Please match the beginning of the sentences on the left with the endings on the right. (5x3=15 pts)
1. The fire spread  
2. It turned out well in the end  
3. He complained about the noise  
4. True art tries not to attract attention  
5. Her health has improved dramatically

a) that might be a result of the festival.  
b) in order to be noticed.  
c) since she started on this new diet.  
d) although it looked as if we were going to fail.  
e) all around the neighborhood.

PART C: Please complete the sentences with the correct vocabulary from the box. Two of them are extras. (6x5=30)

<table>
<thead>
<tr>
<th>lonely</th>
<th>experts</th>
<th>tradition</th>
<th>estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>composition</td>
<td>characteristics</td>
<td>communication</td>
</tr>
</tbody>
</table>

1. Did you know that the more text in an e-mail __________, the more likely it is filtered by spam trigger software?
2. Passionate words, lively tunes and complex rhythms reflect the richness of Nicaraguan folk ____________.
3. The courses are taught by leading ____________ in their fields.
4. Mobile phones provide the voice and data ____________ and modem functionality for portable computers as required.
5. When I visited Germany, I felt I was like a fish out of water and was desperately ____________.
6. The company classifies products based on the physical ____________.

PART D: Please fill in the blanks with the correct vocabulary. (5x3=15 pts)

İpek woke up very early that morning! Her heart was beating with excitement when the alarm clock started ringing at 6 a.m. The big day had come at last! She told herself that it would be a tiring day because she had lots of things to do. How was she going to 1) ____________ all the preparations by herself? She should have asked for help from her best friend. But, it was too late now. She was giving a party for her husband’s promotion that evening. It would be a surprise for Furkan when he came back from work. She knew that he was 2) ____________ this celebration. She had 3) ____________ all of his close friends to the party. She had even hired a clown to 4) ____________ the guests. ‘Let’s start with the cleaning first’ she told to herself. 5) ____________ she was going to make some baklava.

1) a) deal with b) care for c) design d) make up e) give up
2) a) searching for b) looking forward to c) insisting on d) calling for e) standing by
3) a) wished b) invited c) expected d) requested e) wanted
4) a) scare b) interest c) entertain d) enjoy e) experience
5) a) every day b) one more night c) yesterday d) afterwards e) next year

1234
APPENDIX B: Handout

HANDOUT I
Concordance Lines (Target Vocabulary of Chapter 9)
Task 1: Analyze the concordance lines and answer the questions.

1) Search for Techno*

* Find two different concordance lines in which the word is used in a different part of speech (e.g., as a noun and as an adjective).
- Write down the phrases in which the words appear.

* Identify the part of speech in each concordance line.
- In the 1st concordance line, the word ___________ is a/an _______________
- In the 2nd concordance line the word ___________ is a/an _______________

2) Search for Communi*

* Find two different concordance lines in which the word is used in a different part of speech (e.g., as a noun and as a verb).
- Write down the phrases in which the words appear.

* What preposition does the word communication take?_________________________

After looking at the examples in the concordance lines, you now write a sentence using ‘communication’ and the preposition. The sentences should be about something in your life at home or at university.

3) Search for Message*

* Find two different concordance lines which use different verbs with the word message.
- Write down the phrases in which the words appear.

* Can you think of other verbs that can be used with message? Write them down.

After looking at the examples in the concordance lines, you now write a sentence using ‘message’ with a verb. The sentences should be about something in your life at home or at university.

4) Search for Advertis*

* Find two different concordance lines which use the word advertisement in singular and plural.
- Write them down.

* Find a concordance line in which a verb form for the word advertisement is used. Write it down.
After looking at the examples in the concordance lines, you now write a sentence using ‘advertisement’ as a noun or a verb. The sentences should be about something in your life at home or at university.

5) Search for Program*

* Find a concordance line in which a different noun form for the word program is used. Write it down and explain its meaning.

* Find a concordance line in which an adjective form for the word program is used. Write it down.

* Find a concordance line in which a verb form for the word program is used. Write it down.

After looking at the examples in the concordance lines, you now write a sentence using ‘program’ as a noun or a verb. The sentences should be about something in your life at home or at university.

6) Search for Spread*

* Find two different concordance lines in which the word is used in a different part of speech (e.g., as a noun and as an verb).
- Write down the phrases in which the words appear.

* Identify the part of speech in each concordance line.
- In the 1st concordance line, the word __________ is a/an __________
- In the 2nd concordance line the word __________ is a/an __________

After looking at the examples in the concordance lines, you now write a sentence using ‘spread’. The sentences should be about something in your life at home or at university.

7) Search for Familiar*

* Find two different concordance lines with the word familiar.
- Write down the phrases in which the words appear.

- Generally, the word familiar takes the preposition: __________
- In the __________ concordance line, the word familiar takes __________ preposition because __________

After looking at the examples in the concordance lines, you now write a sentence using ‘familiar’ with a preposition (make sure you choose the right one!). The sentences should be about something in your life at home or at university.

8) Search for Deal with*

* Find a concordance line with deal with which uses a modal verb. Write it down.

* Circle the correct choice.
Look at the examples how deal with is used. If you say you need to deal with something, is this usually a positive or a negative thing?
- Generally, deal with is used to refer to positive / negative things.
* Find a concordance line that supports your answer. Write it down. Circle the positive/negative thing that deal with refers to.

After looking at the examples in the concordance lines, you now write a sentence using ‘deal with’. The sentences should be about something in your life at home or at university.
APPENDIX C: Treatment

Appendix D: AntConc Software Screenshot
In the first place, new technology is necessary to correct the harmful effects of previous technology; for example, if "after hours" use of technology is possible, we may try to correct the good of man, unless technological advances are clearly useful and engineers have the right to develop even taller structures. What the new technology can't yet do, though, is to replace simple materials and low technology. These accidental inventions can't be understood, and technology is in order. What the new technology can't yet do, though, is to replace simple materials and low technology. These accidental inventions can't be understood, and technology is in order.