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A Comparison of a Web-based Concordance and Conventional Method for Self-Correction in EFL Writing

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Abstract

Students tend to define writing quality if their work is without errors while teachers pay much attention and spend large amounts of time on error feedback. In writing instruction, a problem occurring in any writing task is giving feedback on errors. Computer corpora and concordances can be an opportunity to be used as effective tools providing sufficiency of language examples for students to observe. These tools are useful for revealing grammatical patterns which dictionaries do not. The purposes of this research were (1) to compare the studies on using a web-based concordance for self-correction and conventional method in EFL writing; (2) to examine which types of grammatical errors are corrected and retained after using the web-based concordance; and (3) to study the satisfaction of students using the web-based concordance in self-correction. The research sample consisted of 40 English major students who enrolled in Essay Writing course. They were divided into 2 classes equally and obtained by convenient sampling. The research instruments comprised a web-based concordance of *Lextutor*, pretest and posttest, grammatical error-correction tasks, questionnaire and in-depth interview. Statistics for data analysis were the percentage, mean, standard deviation, and t-test to compare how significantly different the treatment from control group. Research findings indicated that the posttest scores of the students in the experimental group were higher than the pretest scores at the .05 level of statistical significance. Most of the students preferred using the web-based concordancer for self-correction in writing and perceived the corpus approach as beneficial to the development of their writing skill.

Keywords: Web-based concordance, self-error correction, EFL writing, undergraduate students

Introduction

With the advancement of information technology, Internet is easily accessible and networks are also extensively used in English language teaching. Also, *corpora* (a 'corpus' - in the singular - a collection of texts input into a computer used for the study of language) and concordances are available easily for language teachers to use through CD-ROMs and online websites which are free or commercially available. Corpus has been widely applied for linguistic research and L2 classroom pedagogy for decades since 1980s (O'Sullivan & Chambers, 2006). By connecting to a database of corpus and typing a word or a set of words known as a KWIC (keywords-in-contexts), the key word is positioned in the middle with words of the context on either side appearing one single line of context, known as "concordance". The concordancing program provides a series of concordances

collecting examples which are authentic contexts of a target language from various sources. The following concordances are samples for the keyword “go”

e left, it was dark and time to go home and cook supper for her husband. "
ds who seemed determined not to go home at all. Only a plea from the house
to make when they are about to go home, but drinking is their sickness. Y
row some money from someone and go home by bus? I could send the money rig
saying "American imperialists, go home". Chin up, Soapy. @ B01 0960 8

Figure 1. Concordances of the keyword “go” with word combinations to correct “go to home” from www.lextutor.ca

The data above is known as “concordance output”. Students can study this output and closely see how a keyword operates in context among related words. Students can examine from the left, right, top, and bottom sides of the keyword to find patterns of how the keyword is used in the target language. The use of corpora and concordances is advantageous because it provides meaningful input and encourages students to discover language use on their own. Students can study these concordances closely and see how a keyword operates when appearing with words surrounded (autonomous learning). This makes students eager to develop linguistic resources which are essential for effective writing since they have sufficient examples to look through. Tribble and Jones (1990) mention that the corpus approach connects form and function in the teaching of writing since it is not only raise learners’ language awareness, but also contributes to and understanding of functions of linguistic features in context. It means each student takes the role of investigator from the examples appearing through concordances and then determines the rules of language by themselves. Therefore, it is an alternative way to facilitate writing. In this paper, the use of web-based concordancing is examined for its effects on students’ self-correction process in their essay writing and attitudes.

Objectives

1. To compare the studies on using a web-based concordance for self-correction and conventional method in EFL writing
2. To examine which types of grammatical errors are corrected and retained after using the web-based concordance.
3. To study the satisfaction of students using the web-based concordance in self-correction.

Research Questions

1. Does the web-based concordance enhance the students’ self-correction more effectively than the conventional teaching setting in EFL writing?
2. Which grammatical errors occurred the five most common errors?
3. What are the students’ attitudes toward the use of the web-based concordance in self-correction?

Theoretical Framework

The theories of the study are related to (a) autonomous learning through self-correction and (b) inductive approach through corpus concordancing.

Autonomous learning through self-correction. Many students prefer direct feedback from their teachers; however, self-correction is essential for teachers to use to push them to reach the goal of life-long learning. Giving indirect feedback is one of the

effective ways for students to self-correct their work. The term “learner autonomy” was first used in 1981 by Henri Holec and there are various definitions given. According to Holec, *autonomy* is the ability to take charge of one’s own learning. Autonomous learning is the perception of information related to lifelong learning which contributes to sustainable learning for learners and also meets their needs and differences of each one. The teacher’s role is not just teaching or lecturing in class as in the past, but learning environment is different and this helps learners to learn the language more effectively. This kind of learning encourages learners to seek knowledge by themselves. The new knowledge theory is related to the intellectual development of *Piaget* (Cognitive Theory) stating that learning is based on discovery and experience occurring because learners have built up the knowledge and then adjusted it with the existing knowledge. Therefore, developing learners through self-correction provides the opportunity for them to learn and construct their own knowledge which is necessary for them to improve their language skills. If they are trained to be familiar with rule discovery, it can enhance their learning autonomy and also self-reliance in the future.

Inductive approach through corpus concordancing. Since computer technology plays an important role in people in the 21st century, it allows people to learn and get the information rapidly. Similarly, to study the language, computer technology is used as a tool to develop learners. The use of technology in teaching is a new phenomenon in learning since they can learn things by themselves with the help of technology. The corpus (corpora as a plural form) was invented in 1969 and has been used for English language instruction for decades (O’sullivan & Chambers, 2006). By providing learners with authentic language, this can help them discover the knowledge by themselves. The technology tool like corpus concordancing that they consult should provide correct, clear and sufficient information for them to acquire the linguistic knowledge independently to construct their own knowledge. The method for grammar learning by observing pattern rules from various examples and then generalizing those rules by themselves is known as *inductive approach*. By applying the inductive method, students are more active in the learning process rather than being passive learners. It involves discovery techniques during the acquisition process and exploits authentic material in which the focus is on usage rather than rules. Also, the inductive activity fosters learners in constructing their own knowledge to apply in their own contexts. The teacher’s role is as a facilitator to guide them in discovery and then to provide more opportunities to practice.

Methodology

Participants

The participants of the study were the 3rd year students studying in English for Communication Program at the faculty of Liberal Arts, Rajamangala University of Technology Thanyaburi. The course enrolling was Essay Writing. They were divided into two groups of 20 students equally based on convenient sampling. The samples were diverse in their gender and English proficiency level. They were divided into three groups of weak, average and good, as reflected by their grade from their Paragraph Writing course to measure the effectiveness in using the web-based concordance for self-correction.

Context of the Study

The participants in both groups of web-based concordance and conventional groups were assigned to write three kinds of essay writing: narration, description, and cause and effect. The types of grammatical errors were identified into article, noun plural, verb, tense, voice, subject-verb agreement, preposition, part of speech, spelling, infinitive,

gerund, modal/auxiliary, there is/there are, pronoun, conjunction, word order, punctuation, adjective, adverb and capitalization based on Writing Tutorial Services of Indiana University Bloomington) at the word level. Moreover, their written tasks were examined by the three experienced lecturers.

Instruments

Web-based concordance for correcting errors independently was the Lextutor concordance designed by Tom Cobb, University du Québec à Montréal, Canada. It is user-friendly and appropriate for beginners. It contains 22 corpora for users to search.

Lesson plan was divided into 8 weeks out of 15 weeks of using web-based concordance in writing three types of essay. Also, the students were trained for two weeks so that they were familiar with using the concordance for error correction. It aimed to train them to use the concordance for error-correction before applying the process to self-correction. In this process, they were given exercises to practice.

Pretest and posttest were designed by the researcher and examined by the three experienced lecturers. The purpose was to investigate the students' effectiveness and also the grammatical structures which were most and least successfully corrected after using the concordance for self-correction. The students were assigned to write an essay of 200 words which they could choose among three kinds of writing: narration, description or cause and effect.

Grammatical error-correction exercises were used to train the students how to use the concordance for self-correction. The exercises were designed by the researcher and were examined by the three experienced lecturers. The students had to work with the concordance to discover the correct grammatical rules and then apply to their written tasks (See Appendix A).

Questionnaire was used to survey the students' satisfaction in using the concordance for self-correction. It was the rating scale of five levels (1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5: strongly agree).

In-depth interview was conducted after distributed the questionnaire to get the information on how the students worked with the concordance: computer concordancing skills used, self-observed concordance skills, reflection of prior knowledge and attitudes.

Procedures lasted for eight weeks, including two weeks for the program training. The students in the treatment class were assigned to use the concordance for self-correction and the teacher gave a code for error types such as N. (noun), V. (verb), ADJ. (adjective) and so on. Then, the students generalized the grammatical rules through the exercises while the students' tasks of the conventional class were corrected by the teacher directly. The students' written tasks of both groups were marked by the three experienced lecturers in holistic assessment and sub-categorized the grammatical errors at the word level.

Data analysis was calculated from the exercises, pretest and posttest and questionnaire using the percentages, mean, standard deviation and t-test to compare how significantly different the treatment from the control group. For the data obtained from the interviews were analysed qualitatively.

Literature Review

For EFL learners, writing in English is a hard skill and teachers are required to help them develop their writing proficiency. Editing errors is viewed as an essential process in English writing. The literature reviewed on self-correction and related studies is as follows:

There have been several studies supporting the use of self-correction or self-discovery of grammatical rules for learners, such as the studies of Chandler (2003), Lee (2004),

Prince and Felder (2006), Onodera (2007), and Shih (2008). For using concordances, Gaskell and Cobb (2004) conducted a study to discover how lower intermediate L2 writers coped with using concordances to self-correct their own writing. The results showed their writing skills had improved; however, there was no decrease in the number of errors. This was probably because the errors were so complicated. Similarly, Yoon and Hirvela (2004) investigated the ability of intermediate and advanced ESL students dealing with concordances and attitudes on using them. The study revealed that the students had positive feeling on concordances and they gained more confidence in their writing since they used cognitive skills in working with them. In 2013, Mull did a longitudinal study of four learners using concordances to peer edit their essays. The students also used screencasts and other techniques like audio recording. The results indicated a highly detailed account of how students responded to a concordance and corrected errors. Parise (2013) did a research study on the use of concordances in EFL/ESL writing instruction for Japanese teachers of English in junior high and high school by making use of concordance data for the learners to reflect on their errors and self-edit as feedback. The results indicated that a concordancer can be used as a fruitful resource because it allows the fact of actual language to be observed in writing but the learners should be given closer guidance how to use a concordance program since they had never seen it before and would not know where to start. In contrast to Feng (2014), the participants in the study had a positive attitude on corpus concordancing in writing and self-error-correction. They used corpus concordancing for ESL learner self-error correction in essays and attitudes. The findings showed that the students had a certain pattern to revise errors with dictionaries and corpora. They could also make corrections to word choice in essay writing.

In Thailand, there were not many studies conducted on the use of concordances for self-correction. Todd (2001) did a study via the use of inductive learning with postgraduate students. The results showed that there was a strong correlation between the ability to induce patterns and the ability to self-correction. He also suggested for further studies that teachers should give guidance to learners with simple and clear steps of using the program, together with concordance exercises to practice so that they were familiar with the program before coping with it by themselves. In 2003, Sripicharn evaluated classroom concordancing on the use of concordance -based materials by a group of Thai students. The findings supported teachers' feedback, in conjunction with a concordance, which can help inductive learning since students can discover rules from the concordance and then develop their language awareness. For Tasanameelarp (2009), the results from using concordances on EFL learners' ability to self-correct grammatical errors for low-proficiency EFL learners supported the emphasis on the tasks assigned for the learners. They should be designed appropriately for low level of language proficiency by offering simple language patterns in the form of printouts and also sufficient practices to overcome the problems occurring. Importantly, the learners should be informed about the benefits of independent learning through concordances.

Findings

1. Does the web-based concordance enhance the students' self-correction more effectively than the conventional teaching setting in EFL writing?

In order to answer Research Question 1, the mean scores and standard deviation in the pretest and posttest of the three experienced raters were calculated. The t-test dependent was also utilized in order to determine significant differences between the mean scores on the posttest and the pretest. The data related were as the following.

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Table 1

Effects of Using Web-based Concordance for Self-correction in the Pretest and Posttest (Rater 1)

| Participants | No. of Students | \bar{X} | S.D. | t | Sig |
|--------------|-----------------|-----------|-------|--------|-------|
| Pretest | 20 | 12.80 | 1.795 | -6.631 | .000* |
| Posttest | 20 | 15.05 | 1.638 | | |

* Significant at .05 level

With respect to the data in Table 1, it was found that, on average, the mean score of the posttest was 15.05%, whereas the mean of the pretest was 12.80%. The results of the two groups yield significance at the .000 level ($t = 6.631$, $p < .05$), meaning that the difference between the posttest and the pretest scores was statistically significant.

Table 2

Effects of Using Web-based Concordance for Self-correction in the Pretest and Posttest (Rater 2)

| Participants | No. of Students | \bar{X} | S.D. | t | Sig |
|--------------|-----------------|-----------|-------|---------|-------|
| Pretest | 20 | 12.85 | 1.565 | -13.358 | .000* |
| Posttest | 20 | 14.90 | 1.586 | | |

* Significant at .05 level

The table showed that the effectiveness of the posttest score over the pretest score ($\bar{x} = 14.90$ and 12.85). It showed a statistically significant difference at the level of .05 when the two sets of scores were compared ($t = 13.358$, $p < 0.005$).

Table 3

Effects of Using Web-based Concordance for Self-correction in the Pretest and Posttest (Rater 3)

| Participants | No. of Students | \bar{X} | S.D. | t | Sig |
|--------------|-----------------|-----------|-------|--------|-------|
| Pretest | 20 | 10.45 | 3.017 | -4.790 | .000* |
| Posttest | 20 | 12.35 | 2.739 | | |

* Significant at .05 level

Table 3 showed that the average posttest score ($\bar{x} = 12.35$) was higher than the pretest score ($\bar{x} = 10.45$). The results of the t-test of the posttest and pretest scores was statistically significant ($t = 4.790$, $p < 0.005$).

It is obviously seen that the three tables above indicated the similar results that there was effectiveness of using the web-based concordance for self-correction since the scores of the posttest were higher than the scores in the pretest.

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Table 4

Effects of Using Conventional Method for Self-correction in the Pretest and Posttest (Rater 1)

| Participants | No. of Students | — X | S.D. | t | Sig |
|--------------|-----------------|-------|-------|--------|-------|
| Pretest | 20 | 13.10 | 1.889 | -6.833 | .000* |
| Posttest | 20 | 15.05 | 1.669 | | |

* Significant at .05 level

Table 4 showed the average scores (\bar{x}) of the pretest and posttest increased from 13.10 to 15.05. When the two sets of scores were compared, it was found that they were significantly different ($t = 6.833$, $p < 0.005$).

Table 5

Effects of Using Conventional Method for Self-correction in the Pretest and Posttest (Rater 2)

| Participants | No. of Students | — X | S.D. | t | Sig |
|--------------|-----------------|-------|-------|--------|-------|
| Pretest | 20 | 12.50 | 2.039 | -8.107 | .000* |
| Posttest | 20 | 14.10 | 2.245 | | |

* Significant at .05 level

The table indicated the scores in average of the posttest and the pretest ($\bar{x} = 14.10$ and 12.50). The t-test showed there was a statistical difference between these two groups ($t = 8.107$, $p < 0.005$).

Table 6

Effects of Using Conventional Method for Self-correction in the Pretest and Posttest (Rater 3)

| Participants | No. of Students | — X | S.D. | t | Sig |
|--------------|-----------------|-------|-------|--------|-------|
| Pretest | 20 | 9.95 | 3.021 | -3.136 | .000* |
| Posttest | 20 | 10.93 | 3.454 | | |

* Significant at .05 level

Table 6 showed the mean score in the posttest which was higher than the mean score in the pretest ($\bar{x} = 10.93$ and 9.95). The difference between the means in the posttest and the pretest was 3.136. It appeared that the two sets of scores were significantly different at the level of .000 ($p < .05$).

According to the data in Table 4 to Table 6, the mean scores in the posttest were also higher than the mean scores in the pretest as shown in Table 1 to Table 3. The differences between the means in the pretest and the posttest was -6.833, -8.107, and -3.136, respectively. It appeared that the two sets of scores were significantly different ($t = -6.833$, -8.107 and -3.136, $p < 0.05$). The results indicated that using the conventional method in EFL writing could also develop the students' self-correction.

All in all, it cannot be totally concluded that using the web-based concordance is more effective than using the conventional method for self-correction since the scores in the posttest of both methods were higher than the scores in the pretest.

2. Which grammatical errors are corrected and retained after using the web-based concordance?

From analysis of the grammatical errors at the word level (See Appendix B), it was found that the good students had 15-32 errors, the average students had 15-46 errors and

the weak students had 29 errors before using the web-based concordance. After using the web-based concordance, the number of errors was decreased to 6-22, 14-29 and 30 errors, respectively. The five most common grammatical errors occurring in the pretest were conjunction, punctuation, plural/singular noun equivalent to pronoun, capitalization and verb, respectively. In the posttest, the five most common errors appearing were plural/singular noun, verb, subject-verb agreement, conjunction equivalent to punctuation and pronoun. It is noted that the grammatical errors which occurred in both pretest and posttest but in different ranks were plural/singular noun, verb, conjunction, punctuation and pronoun. Additionally, the number of errors in the posttest was decreased comparing with those occurred in the pretest except tense, infinitive, modal or auxiliary verb, and possessive which showed more errors. The error of there is/are appeared once in the pretest and none of it showed in the posttest. In addition, there was only one student who was weak making more errors in the posttest (30 errors) than in the pretest (29 errors). Regarding the total number of errors, there were 558 errors in the pretest while there were 400 errors which became lower in the posttest.

2. What are the students' attitudes toward the use of the web-based concordance in self-correction?

According to the response in the questionnaire, the students were satisfied with the web-based concordance at the high level (\bar{x} 3.70, S.D. 0.77) when they use the program for self-correction in their writing. The top three ranks why they prefer using the program were it was convenient for them to access the program anywhere and anytime they want via computer or mobile phone (\bar{x} 4.05, S.D. 0.945), it is more useful comparing with dictionaries because of a variety of examples provided (\bar{x} 4.00, S.D. 0.918) and using the program made them discover the grammatical rules by themselves (\bar{x} 3.85, S.D. 0.671). Moreover, they agree to recommend the program to be used for other courses related to writing (\bar{x} 3.50, S.D. 0.761). For additional comments from the interviews, some of them mentioned that if comparing with dictionaries or commercial textbooks, the program provides various examples at the word and sentence levels which made them more understanding about the grammar rules since they learnt and then applied those rules in their sentences. They could select the easy examples to be applied to their sentences. For About the program, they did not feel confused because the teacher explained how to use it step by step and gave guidance which were very clear to understand (but it was hard at the beginning of using the program since they did not get used to it). However, some of them could not make a decision which words or sentences to be selected to match their context since there are many examples and diverse contexts. If without any correction symbols, they sometimes could not generalize the rules of grammar by themselves.

Discussion

The findings of the survey questionnaire and interviews supported the use of web-based concordance for the students' self-correction since they had positive attitudes toward corpus use and agreed that it was very useful for acquiring usage patterns since the program could foster their writing and help them discover the grammatical rules by themselves (Johns, 1991; Osborne, 2001; Cheng et al, 2003; Krishnamurthy, 2004 & Rüschoff, 2001, cited in Chen, 2004; Varley, 2009). In this study, the students did not report coping with the program as the guidance and explanation by the teacher were quite simple and easy to follow, as opposed to Sun's (2000). He mentioned the problem of speed and stability of Internet connections. However, the results of this study are in line with the study of Yoon and Hirvela (2004) who found that the intermediate and advanced learners generally seemed to know how to deal with words in context, as corpora display

them. Also, the students preferred using concordance for correcting grammar but Sun's study in 2000 identified that his participants showed a preference for printed dictionaries and grammar books over corpora due to the direct presentation of data. For giving feedback, the students agreed to use correction symbols together with concordance since this technique may guide them to use their prior knowledge. As mentioned by Tasanameelarp (2010), coded feedback should be provided to the low-proficiency learners as they might be advantageous to low proficient learners and assist them to correct grammatical errors. With reference to students' difficulty in generalizing the grammatical rules, Maneekhao (2001) stated that the concordance program contains a variety of examples; therefore, the students need to use in-depth grammatical analysis to correct errors by themselves. Some students with limited grammatical knowledge cannot identify errors. This is consistent with this study's results since there was one weak student who got more errors in the posttest than in the pretest. From the survey and interviews in this study, a few of them did not try to correct errors and were lazy to use the program for self-correction. According to Lee (2004), the students' previous language learning experience took part in this situation since some conventional teachers gave the students the right answer when checking the students' work. Thus, the students were not familiar with how to edit their work by themselves and waited for the teachers to correct them.

Limitation

Although the evidence shown in this study supporting the use of web-based concordance for self-correction in the students' essay writing, the researcher would not want to generalize this finding since the number of students participating in the study was 20 in each group. Further research would be needed as confirmation to ensure more effectiveness on students' self-correction through this kind of learning tool.

Recommendation for Further Studies

1. From the interviews, students consulted either dictionaries or other alternative sources for self-correction when they had problems with grammatical rules. It may provide a comparative study between students using those sources and concordances when they correct errors by themselves.
2. There may be extended period of the research study to investigate the effects of using concordancing on the students' long-term retention of grammatical knowledge. Also, a retention test should be administered in order to investigate long-term learning.

Conclusion

The main aim of the study was to examine the effects of using web-based concordance to the students' self-correct grammatical errors in essay writing, as well as providing suggestions on how teachers can use this tool with students most effectively. In this study, the students had to construct the grammatical rules by themselves through the web-based concordance and then applied the rules in self-correction. By investigating the word or words in the concordance, the students were expected to inductively learn the grammatical rules. Regarding the results, the students had positive attitudes toward the use of web-based concordance in essay writing. They agreed that the tool was beneficial for acquiring common usage of words and developing their writing skill. Moreover, they did not mention serious difficulty in using the tool to gain the target word/words. It was noted that the level of student proficiency may be worth to be considered since both average and good students seemed to know how to cope with keywords in context while the weak one may need more time and practice to become familiar with the tool. From the interview related to concordance selection, the weak one could not find the expected concordances

from the word search as there were numerous concordance lines to be selected for self-correction. She selected the concordance lines which best allowed her to induce the rules. When she could not find the expected concordances, she only selected the first two or three lines of concordances and wrote the rules she had thought before, which showed no connection between the rule and the selected concordance lines. Perhaps some guiding rules are better served in order to acquire more grammatical input because of insufficient grammatical knowledge of the target language and it might be a result of their unfamiliarity with the inductive learning method. Therefore, in the beginning of using web-based concordance, teachers should observe, guide and monitor to support the students in the class and also give them tasks for self-study outside the classroom so that they are ready to work with the concordance independently. Teachers should give more time for training them rather than paying too much attention to autonomous learning only. This can assist them to become independent users in the long run.

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Appendix A

An Example of Concordance Sheet

Instructions: Search at least 5 concordance lines of each phrase from Business Letter Corpus available at <http://www.lex tutor.ca/conc/eng/> and identify the patterns used to compare the similarities or differences among them. Then, write one sentence of your corrected sentence.

- as a result

Definition: (conj.) because of something

The concordance lines:

1. This loss occurred as a result of the heavy snowfall on January 16 in
2. sation of damages incurred by us as a result of delayed delivery of the ordered mate
3. some people do not have money. As a result of the crash, we have a damaged disk
4. is, he wants to study the patient. As a result, it takes a little longer than it would
5. will do his composing for him; as a result such pictures are only a literal translatio

Identify patterns used:

1. The phrase *as a result* is used with the preposition *of* and followed by *noun/noun phrase* (Item 1, 2, 3).
2. It can be located at the beginning of the sentence (Item 3).
3. It can be used in the middle of the sentence (Item 1, 2).
4. It can be used as a conjunction and attached with a semicolon (Item 5).

Your corrected sentence:

Our company's profits have decreased as a result of the drop in sales.

Appendix B
Analysis of the Grammatical Errors at the Word Level

| S | E 1 | E 2 | E 3 | E 4 | E 5 | E 6 | E 7 | E 8 | E 9 | E 10 | E 11 | E 12 | E 13 | E 14 | E 15 | E 16 | E 17 | E 18 | E 19 | E 20 | T |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----|
| 1 | 1 | | 2 | | | 2 | | 2 | | | | | 5 | | | | | 1 | 1 | 1 | 15 |
| 2 | 3 | 3 | 3 | | 1 | | | 1 | | 2 | | | 4 | 2 | | 1 | | | | 2 | 22 |
| 3 | 3 | 3 | 2 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 0 | 6 | 0 | 1 | 1 | 28 |
| 4 | | 1 | 2 | | 2 | 5 | 3 | | | | | | 8 | 2 | 1 | 1 | | | | | 25 |
| 5 | | 1 | 4 | 1 | | 1 | | | | 2 | | | 1 | 3 | 1 | 2 | 1 | 1 | | | 18 |
| 6 | | 2 | 1 | | | 1 | 1 | | 3 | 1 | 2 | | 5 | 3 | | 3 | 2 | | 5 | | 29 |
| 7 | 3 | 5 | 1 | | | 3 | 2 | | 2 | | | 1 | 3 | 1 | | 4 | 2 | 1 | 2 | | 30 |
| 8 | 1 | 5 | 2 | | 2 | | 2 | 1 | 2 | | 1 | | 4 | | | 7 | | | 1 | | 28 |
| 9 | 2 | 3 | 3 | | | 1 | 2 | 3 | 2 | | 1 | 1 | | 3 | 3 | | 2 | 2 | | 1 4 | 42 |
| 10 | 1 | 1 | 4 | | | 3 | | 3 | 4 | | 1 | | 1 | 1 | | 4 | 2 | | 1 | | 26 |
| 11 | 1 | | 4 | | | | 1 | 2 | 2 | | | | | 2 | | 2 | | 1 | | | 15 |
| 12 | 3 | 2 | 1 | | 1 | 3 | 2 | 1 | 3 | | 1 | 1 | | 1 | 2 | | 4 | 3 | 3 | 1 | 32 |
| 13 | | 8 | 1 | 1 | | 2 | 3 | | 3 | | 2 | | | 2 | 2 | | | 1 | | 5 | 30 |
| 14 | 4 | 6 | 1 | | 2 | 1 | 1 | | 2 | | 1 | | 5 | 4 | | 4 | | | 1 | | 32 |
| 15 | | 1 | 1 | | | 2 | 1 | 2 | 1 | | | | 2 | 3 | | 2 | 3 | 1 | 1 | | 20 |
| 16 | 1 | | 3 | 1 | | 3 | 1 | 3 | 1 | | | | | 2 | | 1 | | | | | 16 |
| 17 | 2 | | 4 | 1 | | 5 | 4 | | 7 | 4 | 2 | 3 | | 2 | 6 | | 1 | 3 | 1 | | 45 |
| 18 | 1 | 4 | 2 | | | 5 | 2 | 1 | 1 | | 2 | | 1 | 3 | | 1 | | | 6 | | 29 |
| 19 | 2 | 4 | 2 | | | 3 | 5 | 3 | 3 | 1 | 3 | | 8 | 5 | | 6 | | | 1 | | 46 |
| 20 | 2 | 2 | 3 | | | 1 | 1 | 2 | 5 | | | | 2 | 6 | | 1 | 1 | | 4 | | 30 |
| Tot al | 3 0 | 5 1 | 4 6 | 4 | 8 | 4 4 | 3 3 | 2 5 | 4 1 | 6 0 | 2 7 | 1 5 | 5 7 | 5 4 | 2 | 5 2 | 2 1 | 1 0 | 4 6 | 55 8 | |
| Ra nk | 8 | 2 | 5 | 1 3 | 1 1 | 6 | 7 | 9 | 6 | 1 3 | 9 | 1 2 | 1 5 | 3 | 1 | 1 4 | 2 | 9 | 1 0 | 4 | |

Pre-test with Totals of Errors

Posttest with Totals of Errors

| S | E 1 | E 2 | E 3 | E 4 | E 5 | E 6 | E 7 | E 8 | E 9 | E 10 | E 11 | E 12 | E 13 | E 14 | E 15 | E 16 | E 17 | E 18 | E 19 | E 20 | T |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----|
| 1 | | | | | | 1 | | 1 | | | | | | 1 | | | | | 3 | | 6 |
| 2 | 4 | 1 | 7 | | | | 1 | 1 | 1 | | 3 | | 1 | 1 | | 1 | | | | | 21 |
| 3 | 4 | 3 | 3 | | 1 | 2 | 2 | 1 | 1 | 1 | | | | 3 | | 3 | | | 3 | | 27 |
| 4 | | 2 | 3 | 2 | | | 2 | | | | | | 6 | 3 | | 1 | 2 | | 1 | | 22 |
| 5 | 1 | 2 | 1 | 3 | | 1 | | | | 1 | | 1 | 1 | 4 | | 2 | | | | | 17 |
| 6 | | 4 | 1 | | | | 3 | 1 | | 1 | | 1 | | 3 | | 3 | 1 | | 1 | | 19 |
| 7 | | 1 | 4 | | | 4 | | | 1 | | | | 1 | 2 | | 5 | 5 | | 1 | | 24 |
| 8 | | | | | | 3 | 1 | | 1 | | | | 3 | 1 | | 5 | | | | | 14 |
| 9 | 1 | 1 | 1 | | | 1 | 1 | 1 | | 2 | | | 4 | 2 | | 2 | | | | | 16 |
| 10 | | | 5 | | | 1 | | 3 | 1 | | | 1 | 3 | 1 | | 1 | 1 | | 3 | | 20 |
| 11 | 2 | 1 | 3 | 1 | | 2 | 1 | | 1 | | | 1 | 1 | | | 1 | | | | | 14 |
| 12 | 1 | 1 | | | | 1 | 2 | | 1 | | | | 3 | 3 | | 3 | | 1 | 2 | | 18 |
| 13 | | 7 | 2 | | 1 | | | | | | | | | 2 | | | | 1 | | 2 | 15 |
| 14 | 3 | 7 | 3 | | | 1 | 1 | | | 1 | | 2 | 1 | 4 | | 3 | | | 1 | | 27 |
| 15 | | 1 | | | 2 | 4 | | 3 | 3 | | 3 | | | | | 2 | | | 1 | | 19 |
| 16 | 1 | | 2 | | | | 1 | | 1 | | 1 | | 1 | 1 | | 2 | | | 1 | | 11 |

A COMPARISON OF A WEB-BASED CONCORDANCE AND

| | | | | | | | | | | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| 17 | 3 | 3 | | | 3 | 1 | 2 | 1 | 4 | | | 4 | 1 | | 4 | 1 | | 27 | |
| 18 | 1 | 5 | 2 | | 4 | 2 | 1 | 2 | | 3 | | 2 | 1 | | 3 | 3 | 1 | 30 | |
| 19 | | 4 | 3 | | 6 | 1 | 1 | 4 | 2 | 1 | 1 | 1 | 2 | | | 2 | 1 | 29 | |
| 20 | 5 | 2 | | | 1 | 5 | | 1 | 1 | 2 | 1 | | 4 | | | 1 | | 24 | |
| Tot | 2 | 4 | 4 | | 3 | 1 | 1 | 2 | | 1 | 1 | | 2 | 3 | | 3 | 1 | 2 | 40 |
| al | 5 | 5 | 5 | 6 | 5 | 9 | 8 | 5 | 0 | 9 | 5 | 0 | 7 | 8 | 1 | 8 | 9 | 2 | 0 |
| Ra | 6 | 1 | 2 | 1 | 1 | 3 | 1 | 1 | 3 | 1 | 1 | 1 | 0 | 5 | 4 | 1 | 4 | 3 | 1 |
| nk | | | | 4 | 5 | 0 | 1 | | 3 | 3 | 1 | 2 | | | 7 | | | 6 | 7 |

1 article, 2 noun (singular/plural), 3 verb, 4 tense, 5 voice, 6 subject-verb-agreement, 7 preposition, 8 part of speech, 9 spelling, 10 infinitive, 11 gerund, 12 modal/auxiliary, 13 there is/there are, 14 pronoun (possessive, relative pronoun), 15 conjunction, 16 word order, 17 punctuation, 18 adjective, 19 adverb, 20 capitalization