Tan, S. C. et al. (Eds.) (2013). Workshop Proceedings of the 21st International Conference on Computers in Education. Indonesia: Asia-Pacific Society for Computers in Education

Promoting Second Language Writers' Error Corrections with Corpus: A Case Study

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Abstract

How corpora can be used to facilitate second language writing has been of great interest. Previous studies have revealedbenefits of this application in non-native English students' writing development. However, how corporacanbe used for self error-corrections in essay writing, especially the pattern of corpus consultation, has been little studied.This paper examines the effects of corpus concordancing on error-correctionsand student attitudes toward such corpus use in essay writing. Three ESL graduate studentsenrolled in a US Midwestern university were invited to write three essays that were randomly selected from the TOEFL-iBT essay-question database. The purpose of the essay tasks was three-fold: Essay 1: to assess students' writing competence before training; Essay 2: to examine students'application of *corpus concordancing*to revise Essay 1; Essay 3: to evaluate students' use of corpus consultation to write another essay after training. The results showed that in Essay 2, the students corrected the most "word choices" and in Essay 3, they tended to prevent poor word choices. In addition, the students perceived the corpus training as beneficial to self error-corrections in essays. This paper concludes with pedagogical and research implications.
Keywords: Second language writing, corpus linguistics, writing instruction

1. Introduction

Writing is one of the most important skills in academic contexts. However, nonnative English speakers (NNES) often have difficulty producing texts that are syntactically, lexically, and pragmatically appropriate (Yoon &Hirvela, 2004; Yoon, 2008; Bloch, 2009). Their difficulty is often related to their lack of knowledge in collocations, first language interference, and confusion of word choices (Fan, 2009). They tend to make errors that are different from those made by native English speakers (NES) (Gilquin, Granger, &Paquot, 2007). Facing this situation, instructors and researchers have called for the application of corpus search results in academic writing. The corpus database allows learners to type in a keyword and see a long list of authentic uses of the word with different collocations. These uses occur in the form of portions of sentences, with the keyword positioned in the middle of them. For example, if we type in the word *research*, we will see a series of the keyword in use in the following:

Figure 1. Concordance Output Of The Word "Research" From *Corpus of Contemporary American English* (COCA).

The output listed above is called "concordance output" which can be used by students to study how a keyword functions in context with other related words (Yoon &Hirvela, 2004). The purpose of a concordance program is to produce the word list. Corpus concordancing as lexico-grammatical consultation has been introduced into second language (L2)writing classrooms. Many studies have reported that NNES students benefit from the use of corpus concordancing in collocations and overall writing performance (e.g., Gilmore, 2008; O'Sullivan & Chambers, 2006; Todd, 2001; Yoon &Hirvela, 2004). However, few studies have investigated the connection between the use of corpus concordancing and students' self error-corrections (Gaskell & Cobb, 2004; Gilmore, 2008; O'Sullivan & Chambers, 2006). In this paper, we examined the effects of corpus concordancing on students' self error-corrections in essay writing and their attitudes toward the use of this corpus.

2. Literature Review

Corpus Research in L2 Writing

The term "corpus" first occurred in 1969. It became popular since the 1980s for its application for different purposes (O'Sullivan & Chambers, 2006). A corpus can be defined as "a collection of sampled texts, written or spoken, in machine-readable form which may be annotated with various forms of linguistic information" (McEnery, Xiao, &Tono, 2006, p. 4). It is a searchable language database for various functions. For example, learner corpora were developed to analyze L2 students' errors to show how adequate their L2 perceptions are (Belz&Vyatkina, 2008; Gilquin et al., 2007).

Corpora have been introduced into L2 writing classrooms to provide students with authentic materials and concordances for inductive learning (e.g., O'Sullivan & Chambers, 2006; Yoon &Hirvela, 2004). By consulting a corpus, English-as-a-Foreign-Language (EFL) students gain help in improving the naturalness of their writing (Gilmore, 2008). Numerous studies have been conducted to explore L2 learners' attitudes/experiences of using corpus and L2 learning performance/outcomes (Cheng, Warren &Xun-feng, 2003; O'Sullivan & Chambers, 2006; Yoon, 2008; Yoon &Hirvela, 2004). Moreover, EFL student-teachers are encouraged to attend corpus-related training sessions to better understand how to incorporate this instructional and research tool in their classrooms (Breyer, 2009). Corpora offer an easy-to-search authentic language database for learners to consult and learn from.

When using the corpus, learners first focus on the word they are interested in, and then they look for patterns to illustrate the word's usage. One of the purpose of this study is to understand how learners apply patterns and rules they derived from the corpus concordancing program in order to modify errors by themselves, which is also called self error-correction.

Self Error-Correction

The question regarding whether errors should be corrected has been long debated. Some argued that errors should not be corrected (Truscott, 1996, 1999) while others suggested that error-correction is necessary (Ferris, 1999, 2004). Although the results were inconclusive, it seems that students correct their errors better if they receive some kind of error identification.

Few studies have reported on the connection between self error-correction and corpus concordancing. Here we review a handful of studies related to the current study.

Gaskell and Cobb (2004) presented a case where the teacher hyperlinked concordance lines to students' errors as a form of feedback in their first four essays so that students could consult the corpus by themselves. After that, students were asked to write other essays. However, after the teacher stopped providing hyperlinks to essays, students did not use the corpus as often as they had in the first four essays. As for the occurrences of types of errors, the study found that by comparing pre-test and post-test sample essays, the number of errors with word choice, capitals/punctuation, and pronouns decreased, but the number of errors with articles, noun pluralization, and subject-verb agreement increased.

Similar to the previous study,Gilmore (2008) studied how corpus concordancing could improve English writing for 45 second-year intermediate-level Japanese learners who enrolled in an English academic writing course. Sentence-level, lexical, and grammatical errors were underlined by the instructor. To make their sentences more native-like, the students made changes with the use of a corpus.

O'Sullivan and Chambers (2006) investigated the effects of corpus consultation for French writing by 14 English speakers who were undergraduate and master's students in the University of Limerick and majoring in Applied Languages and Applied Languages with Computing. The teachers marked the locations of errors in the papers and then asked students to revise by consulting a researcher-compiled French corpus. The results showed that learners tended to correct grammatical errors.

The above studies indicate that teachers gave students implicit corrections and encouraged them to consult a corpus to learn how to deal with the errors. In review of related literature, we found that corpus concordancing program could help L2 students in their writing processes. However, how such program can be applied for self error-corrections in essay writing, particularly the patterns of corpus consultation, has not been studied.

3. Research Questions

Two questions guided this study:

1. What are the effects of *corpus concordancing* on students' self error-corrections in essays?
2. What are the student attitudes toward the use of *corpus concordancing* in their self error-corrections and overall writing practice?

4. Methods

Thisstudy adopted a mixed-method design in order to answer the research questions. Both qualitative and quantitative data were collected concurrently.

Participants

This study took place in an ESL academic writing tutorial classin a US Midwestern university. Since this was intended as a pilot study, only three students were recruited for the study. They were one male and two female graduate students. All of them were from China. Their average age was 22. Their English proficiency level was at least in the intermediate-level based on their TOEFL scores upon their admission into the university. They majored in these academic programs: Physics, Chemistry, and Informational Computer. The reason that we recruited these participants was also because none of them had previous experience of using the corpus concordancing program.

Materials

Materials used for data collection included the following:

- Synonymous lexical items (Tsui, 2004, p. 44) for students to complete corpus consultation activities.

- Two writing prompts from the TOFEL-iBT essay question database (for pre- and post-training sessions).
- Corpora used for student consultation: Corpus of Contemporary American English (COCA)[2] and Lexical Tutor: Concordance (LTC)[3].
- Survey questions using a four-point scale and open-ended items for pre- and post-testing.
- Semi-structured interviews conducted in the middle of and at the end of all the sessions.

Procedure

Materials used in the study were summarized in Table 1:

Table 1: Stages and tasks

Stages	Tasks
1	Pretest: Essay 1
	Pre-Survey
2	Training
	Practice: Essay with corpus (not collected)
	Observations
	Field notes
	Audio recordings
3	Revision of Essay 1 (Becomes Essay 2)
	Four corrected errors
4	Essay 3
	Four corrected errors
	Screen-recording
5	Post-survey
	Group discussion
	Individual interviews

Data analysis

All research questions were answered by both qualitative and quantitative data. In terms of the first research question (What are the effects of *corpus concordancing* on students' self error-corrections in essays?), screen-recordings and interviews with students were triangulated in order to investigate how they accomplished self error-correction. Frequency analysis was applied to compare the differences between errors in three essays. Observation notes and student interviews were also used for triangulation.

As for the second researchquestion, (What are the student attitudes toward the use of corpus concordancing in their self error corrections and overall writing practice?), several techniques were applied. These techniques included survey responses, field notes from observations, group discussions, and individual student interviews.

5. Results and Discussion

The Effects of Corpus Concordancing on Error Corrections

Overall,the number of errors decreased due to the use of corpus concordancing and dictionaries. In Essay 1 (average word count: 310), there were 70 errors (23%). Students most frequently committed word choice (n=17, 24%) and conjunction (n=10, 14%) errors. In Essay 2 (revised Essay 1), the total corrected errors were 59 (84%). The students corrected most of the errors of word choice (n=14, 20%) and conjunction (n=9, 13%). There were 11 errors that students did not correct, either because of the

[2]COCA: http://corpus.byu.edu/coca/
[3]LTC: http://www.lextutor.ca/concordancers/concord_e.html

lack of time, understanding of errors, or ability to perform an effective search. In Essay 3 (average word count: 372), students committed 55 (18%) errors. The errors students committed most frequently were word form (n=20, 36%) and article (n=8, 15%) errors.

Comparing Essays 1 and Essay 3, the number of errors decreased but the word counts increased. Notably, the number of errors of "word choice" decreases (17%, $p = 0.07$). This is similar to Gaskell and Cobb's (2004) result. They also found that the errors of word choice were significantly decreased comparing pre- and post- sample essay from their participants. It could suggest that with the facilitation of corpus concordancing and dictionaries, students gain more support with word choice, so that they do not make as many errors as in Essay 1. On the other hand, "word form" errors increased 25% from Essay1 to Essay 3 ($p = 0.06$). This might suggestthat, when students received support, they spent more time searching for word choice, but spent less time checking their usage of the word form, which had to be identified by them.

Student Attitudes toward Corpus Concordancing and L2 Writing

From the post-test survey, the students thought that corpus concordancing would help their writing in the future (92%). They believe that "Having teachers to identify your mistakes, and you correct them by yourselves" is the most effective way to improve their writing (100%). From the interviews, they reiterate the importance of having teachers to identify their errors would be the most beneficial for their future writing. Nevertheless, when asked the most beneficial way to improve their writing when there is no teacher, they say, "then, corpora will be needed in that case." They also realized when the best time is to use corpus concordancing. They used it as a supplement to rather than a replacement for dictionaries, especially when they needed to look for the usage or collocations of words and to distinguish the differences between synonyms.

6. Conclusion and Implication

The purpose of this study is to examinehow corpus concordancing affects self error-correction process in essaysand learners' attitudes toward corpus concordancing in facilitating their error-correction processes. The results suggest that writing with the facilitation of corpus consultation would better improve students' writing. Students held a positive attitude toward using corpus concordancing in their future writing. They regarded corpus as a supplement rather than a replacement for dictionaries.

A few pedagogical implications are offered. By implementing corpus concordancing, it is hoped that teachers' workload of providing students writing feedback could be decreased. Moreover, it is hoped that students would become more independent and responsible for their error corrections because corpus concordancing would facilitate at least certain types of errors.

For future studies, this paper has some research implications to offer. First, the findings based on only three participants are too limited to be generalized to other learner groups or classroom contexts. It is suggested that future studies can recruit more participants to better examine the effects of corpus use in academic writing and also student attitudes toward corpus use. Moreover, due to time constraints, data collection was completed in merely nine hours with three essays. To what extent corpus consultation could help students with their error corrections duringa longer period of time is unknown. It would be better if the time frame could be extended for data collection and for more training sessions.

Acknowledgements

We would like to thank the three participants for their time and help in this study.

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