Enhancing EFL Students' Knowledge of Connectors in Academic Writing by Applying Corpus-Based Exercises

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Abstract: This study examined the efficacy of using corpus-based exercises to enhance EFL students' knowledge of connectors in academic writing. The exercises were based on a preliminary analysis of connectors use in EFL student's corpus produced by 80 EFL students. In order to accomplish the aims of the study, we compiled and investigated 720 writing tasks of Thai EFL university students comprising of 461,965 words running words. Then, we thoughtfully created corpus-based exercises and applied over a 10-week period (45 minutes each) with both class-work and homework exercises. The participants were 33 third-year students who enrolled in the essay writing course. The research instruments of the study were the pre-test and post-test and the dependent sample t-test study was used to evaluate the efficacy. The statistical analysis of the pre-test and post-test results revealed that using corpus-based exercises to enhance their knowledge of using connectors was profitable.

Introduction

English language plays a significant part in Thai education system in all levels. It is taught as a foreign language and be as compulsory course studied field for students in education levels. Besides, students have to be adequately exposed to all of the four basic skills namely listening, speaking, reading, and writing [1]. Learning and teaching English could be assisted students to apply efficiently in their academic contexts, requirements, and disciplines [2]. Writing skill appears to be one of the far-reaching for university students to learn especially for foreign and second language learners. Thus, it is undeniable that writing skill has been considered as the most difficult among four English skills. Besides, it is the complicated process of expressions even for native speakers since students are also required to reach large vocabulary knowledge, grammar and awareness of register, genres, and styles in order to write properly [3-4]. In addition, it has been realized as the hardest skill to teach, as teachers have to dedicate themselves to students' writing with more time, energy, experience, and competence in order to boost students to promote their writing skill effectively. Further, writing skill is very significant to students who prefer to accomplish their self-determination in reading, writing, and text comprehension when they learn other languages [5].

In the case of academic writing, it is acknowledged as one of the most influential skills for university students who have to write in academic contexts. Yet, it still is a skill that is problematic for ESL/EFL students because the ability to write effectively is very crucial in second language learning. This is because writing is related to a complicated process that requires cognitive and critical skills. Also, it mostly connects the linguistic ability development of the students and most of ESL/EFL learners known as a challenging task [2]. Again, students need to think carefully and learn to use a lot of powerful word expressions, a great vocabulary, and different parts of academic writing that are arranging paragraphs by utilizing robust style of word structures, paraphrasing, and using appropriate conjunctions. Since, using

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conjunction or connectors is a useful tool for developing cohesion and a linked tool with its functions can be used across in sentences [6-7]. Some research studies have mentioned that connectors could be known in many ways such as discourse. Moreover, one thing that is important in ESL writing is that the inappropriate use of connectors could be an obstacle in achieving the communication or even lead to misunderstandings. It is therefore significant for second language learner to acquire the proper way of using connectors in the target language. With these reasons, in order to help EFL students to achieve in academic writing, learning and teaching how to use connectors is considered as one of important ways for improving their writing skill. Therefore, the present study aims to develop the corpus-based exercises basing on the most frequently connectors to assist the teaching of essay writing.

By doing so, students would be aware of the use of connectors when writing then they would have more skills in performing their writing and would not repeatedly make mistakes of using connectors in the future. Further, the results of the present study would provide a clear picture for writing teachers. The findings would serve writing teachers preparing practical and successful teaching materials for improving their students to well aware of the connectors and fully learn how to make them correctly.

Objectives
1. To develop the corpus-based exercises basing on the first 30 words most frequently connectors to assist the teaching of essay writing.

2. To investigate the efficacy of using corpus-based exercises to enhance EFL students' knowledge of connectors in essay writing.

Materials and Methods
The Participants
The participants of the current study were 33-third-year students majoring English who enrolled in the Essay Writing course in the first semester of the academic year 2018 thus they were chosen by using purposive sampling method.

The Compilation of the Corpus
The selected corpus of this study comprised of 720 writing tasks written in English by 80 EFL students majoring English as a part of Essay Writing course, which is a requisite subject of their Bachelor degree. The compilation of the corpus was undertaken during the academic year 2016 to 2017. Third-year students were asked to write the essay sets that had nine topics and the length of these essays ranges from 400-1,200 words. Thus, the number of running words in the corpus of third-year students writing was 461,965.

The Research Design
According to the research purposes, there were two phrases of the procedures: creating corpus and making corpus-based exercises. In this study, the efficacy of using corpus-based exercises on EFL students was evaluated by using one-group pre-test and post-test design. Since, it was quantitative and qualitative study; therefore, the data collection instruments were pre-test, post-test, an interview to determine students' opinion on corpus-based exercises.
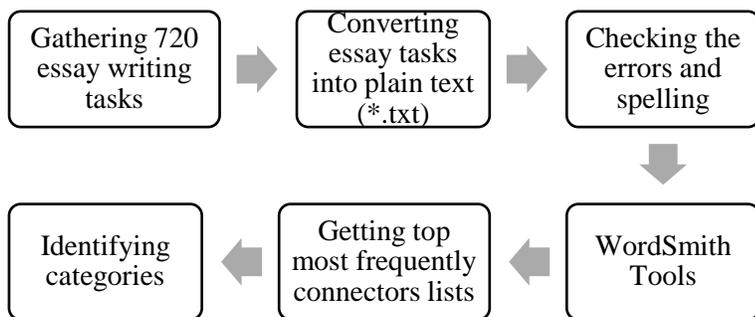
Phrase 1: Creating Corpora

Figure 1 Research Procedure Phrase 1

To accomplish the purposes of the study, the 720 essay writing tasks written by 80 EFL students majoring English were chosen as the significant input for the corpus. The first phrase was to build up a list of connectors that matches the first research purpose and the criteria of the study is covering frequency and ranging. The criteria of the study are according to their appearance of the connectors which should be appeared at least 50 times in the complete corpus.

Furthermore, all essay writing tasks were handwritings thus we had to typewrite them into the Word documents in order to check the errors and spellings easily before using the lexical analysis program. After finished checking the errors and spellings of all files, the computer software program
 "WordSmith Tool Version 6" was employed to form a connector list of by using the Wordlist Tool that could help to provide both alphabetical and frequency order in the text files. Subsequently, the most frequently occurring connectors were obtained then they were checked by native speakers and checked the categories. To identify and classify the categories of connectors that frequently occurred in this corpus following the basis of Quirk et al. [8] as presented below.

**Table 1 Categories of Sentence Connectors**

| Categories	Connectors
Listing	First, second, firstly, secondly, finally, further, furthermore, in addition, moreover, lastly, last but not least, to begin with in the first place, in the second place, similarly, for one thing, for another, above all, for a start, in the same way, likewise.
Summative	To sum up, to conclude, in summary, in sum, in short, in brief, in conclusion, overall, all in all, altogether, namely, then.
Appositional	That is, that is to say, in other words, for instance, for example namely, e.g., i.e.
Resultive	Consequently, hence, therefore, thus, as a result, as a consequence, in consequence, so.
Inferential	Therefore, in that case, otherwise, in other words, if so.
Contrastive	However, although, (even) though, on the other hand, instead, after all, on the contrary, in contrast, besides, nevertheless, anyway, still, nonetheless, alternatively, rather, more precisely, in any case, by contrast, again.
Transitional	Meanwhile, eventually, subsequently, originally, in the meantime, by the way, incidentally.

The Software for Analysis

The concordancing software "WordSmith Tool Version 6" [9] was selected for this study. It is an integrated suite of programs for looking at how words behave in texts and used to examine how words were used in any kind of texts. The Wordlist tool of concordancing software was used for making a word list of vocabulary. The characteristic capacity of wordlists supports the alphabetical and frequency order of the words and phrases [10]. This concordancing software can make a comparison between numbers of words or phrases then the results are completed by the selection and grading of the words and phrases as the sources of dictionaries or teaching materials. As suggested by Scott [11], it arranges to distinguish the category of vocabulary by calculating token (running words) and type (distinct words).

Phrase 2: Making Exercises
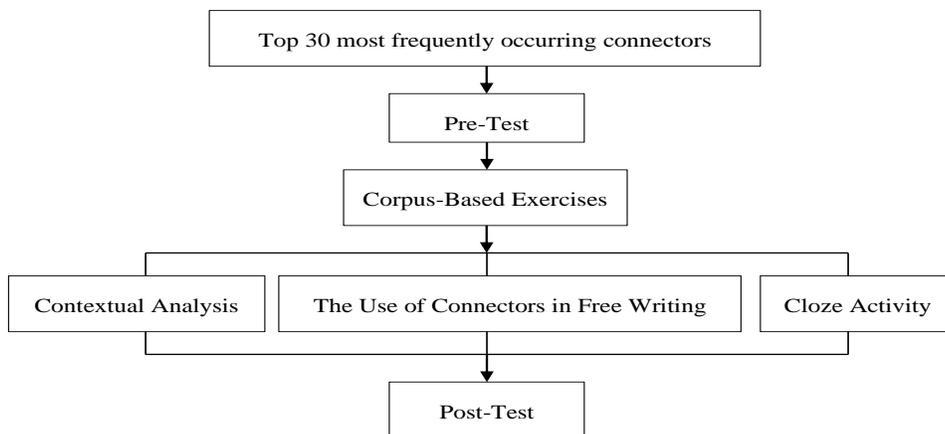
Figure 2: Research Procedure Phrase 2
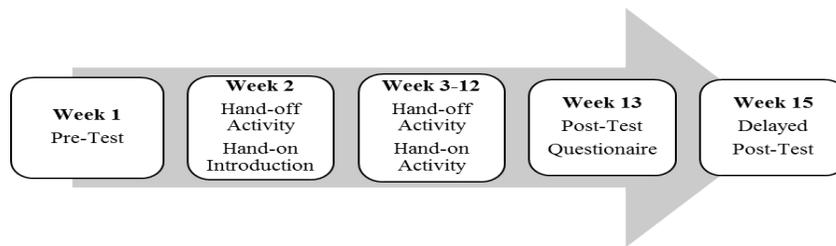
Figure 3: Data Collection Outline

In the second phase of the study, a pre-test was given to the participants to determine their connector competence. We assigned the test to estimate general knowledge according to target connectors as it was set up in a weekly lesson plan. There were target connectors related to the units in the course and the contextual analysis could help the participants in trying to analyze the context of each connectors in order to see how connectors were used. Furthermore, the cloze activity designed based on the target connectors might be used to assist the participants in practicing the uses of connectors according to their categories. A sample was given to the participants before giving the test in order to make them familiarize the test scheme and it was written in a context with some difficult words in sentences or paragraphs but they can get the whole meaning of the context.

For the pre-test and post-test, they were separated into two parts that were multiple choices and writing part by filling in the blanks with connectors. For the first part, it contained 40 multiple-choice questions with four options. The participants would gain one point for every correct answer and receive zero point for every wrong answer when they chose multiple answers. The second part was writing part with the cloze test consisted of 20 items to gauge the students' understanding of perceiving the target connectors and practice their connector's knowledge correctly. In addition, the writing part was designed by incidentally choosing from 20 out of 30 target words that students needed to familiar with.

Data Collection Outline

For the purposes of the study, the data collection process designed to examine the capacity of using corpus-based exercises to enhance EFL students' knowledge of connectors. Creating corpora and corpus-based exercises are very challenging; however, we tried to design corpus-based exercises in the process of 10-week training. In the first week, students reached a pre-test for

50 minutes that concentrated on the students' knowledge of connectors in essay writing which mixed up from the top 30 most frequently occurring connectors. Later, all students were received the homework and the classwork activities then they were guided in order to understand the purpose of doing exercises. The hand-on activities instruction were briefed to the participants before doing then the classwork and homework exercises were granted to the students from week 3 until week 13. In the week 13, they took a 50-minute-post-test emphasized on connectors; however, these connectors were scramble thus the tests did not mirror each other.

In order to remind students' knowledge of connectors, the delayed post-test was given to the students which was conducted 2 weeks later. This test also contained 40 multiple-choice questions with four options and writing part with the cloze test consisted 20 items.

Results

In order to examine the efficacy of using corpus-based exercises in academic writing development of EFL students, we applied the pre-test, post-test, and delayed post-test that purpose to estimate whether practical or not in teaching connectors through corpus-based exercises. The pre-test, post-test, and delayed post-test were analyzed to clarify scores in order to see whether there was a correlation between results of these tests. In addition, the responses to the questionnaire will be presented here.

Table 2 demonstrated that the minimum score of the pre-test of the 33 students was 30 and the maximum score was 45 thus, the mean score of the pre-test was 37.75 and standard deviation was 4.03. While the minimum scores of post-test were 37, the maximum score was 52, the mean score was 44.22 and the standard deviation was 4.51. This can be supposed that students have made progress in writing skill after using corpus-based exercises.

Table 2 Summary of the Pre and Post-Test

	N.	Min	Max	Mean	Standard Deviation
Pre-Test	33	30	45	37.75	4.03
Post-Test	33	37	52	44.22	4.51

Table 3 provided the t-value was 5.418 and p-value was 0.000 when comparing the mean scores of the pre-test and post-test by using t-test statistic. It can be concluded that the students got the higher scores after they used the corpus-based exercises to assist their knowledge of connectors and writing abilities with a statistically significance difference at 0.05.

Table 3 The Comparison of Mean Scores of the Pre and Post-Test (Dependent-Sample T test)

	Mean	Standard Deviation	t-value	p-value
Pre-test	37.75	4.03	5.418	0.000
Post-test	44.22	4.51		

Table 4 Results of the Post-Tests and Delayed Post-Tests

	Mean	Percentage of Correct Items
Post-test	44.22	73.7
Delayed Post-test	43.03	71.7

The delayed post-test that students were asked to do after doing the post-test in two weeks later for measuring the retained knowledge after instruction and post-test [12-18]. The delayed post-test includes two parts that have 40 multiple-choice questions with four options and the cloze test consisted of 20 items as same as the pre-test and post-test but nevertheless these connectors that used in the three tests were scramble hence the tests did not make an exact a copy of each other. Again, the participants will get one point for every correct answer and receive zero point for every wrong answer when they make answers.

As it is shown in Table 4, the comparison of mean scores exhibits that all of the students in the research had success in learning target connectors. It can be concluded that students acquired the connector's knowledge through corpus-based exercises and used them effectively in essay writing class. Consequently, we could claim that corpus-based exercises provide more an authentic way of learning connectors within the correct connectors as well.

Table 5 Students' Opinions after Using the Corpus-Based Exercise

Items	$\bar{X}$	S.D.	Level
1. The exercises support me to improve my knowledge of connectors in writing skill.	4.69	0.60	Very High
2. The exercises encourage me to remember the target connectors.	4.37	0.23	High
3. The exercises provide me to comprehend the meaning of the target connectors.	4.55	0.48	Very High
4. The exercises provide me to learn the connectors appearing in our everyday life.	4.18	0.24	High
5. The exercises help me to be able to employ the target connectors accurately.	4.66	0.48	Very High
6. The contextual analysis, the use of connectors in free writing, and cloze activity help me to improve my writing ability.	4.24	0.46	High
7. The contextual analysis, the use of connectors in free writing, and cloze activity help me to understand the meanings of words.	4.39	0.15	High
8. The contextual analysis, the use of connectors in free writing, and cloze activity make me ready to use the target connectors in contexts.	4.61	0.20	Very High
9. The exercises motivate me to realize the needs of learning the target connectors to improve my writing ability.	4.12	0.50	High
10. After using the corpus-based exercises, I can recognize and use the target connectors better.	4.70	0.15	Very High
Total	**4.45**	**0.35**	**High**

The questionnaire used in the present study was adapted for asking the students' opinion after using the corpus-based exercises from the questionnaire by Veerachaisanitkul and Chansin [19]. Table 5 presented the students' opinions after they used the corpus-based exercises for over 10 weeks, it can be concluded that most of students were satisfied with using the corpus-based exercises and they thought that it is a helpful tool as their opinion with the mean score of 4.45 is at high level. Therefore, it can be concluded that students accepted to use these exercises in order to support them in developing their connectors' knowledge in academic writing. In addition, they displayed that using corpus-based exercises inspired them to learn and able to write with the confidence of developing their connectors' knowledge in writing skill as well.

Conclusion

It could be concluded that the findings of the current study that using corpus-based exercises was effective in improving the students' knowledge of connectors. The students' retention level of achieving these connectors was also seen to be constant which points out worthwhile learning appeared through the use of corpus-based exercises. Additionally, it can be assumed that the target connectors were kept in their lifelong memory and students could remind the target connectors to do the post-test and delayed post-test successfully. Accordingly, writing teachers, course designers, and material developers should regard using corpus-based exercises in teaching in order to enhance students' knowledge of connectors.

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