"I Used Them Because I Had to . . .": The Effects of Explicit Instruction of Topic-Induced Word Combinations on ESL Writers

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Abstract

This study attempts to determine whether the students who receive explicit instruction make more gains in their abilities to use topic-induced phrases in their writing than those who do not. Additionally, through interviews with a selected group of students from the treatment group, the study attempts to glean insights into the approaches learners use for written production of the target phrases. Data was collected from 54 ESL students in high-intermediate writing classes at an IEP who were assigned to the contrast (N=19) and treatment (N=35) groups based on their class enrollment. Over a period of four days, the treatment group received training on 15 target structures. The contrast group received no vocabulary instruction. Both groups were exposed to the target phrases through reading the same course materials and discussing them in class. The data included the scores participants received on the production of the target structures in their essays at the beginning and end of term. A repeated-measures ANOVA revealed that while both groups made improvement, it was the treatment group that made more significant gains in their abilities to produce topic-induced phrases than the contrast. The interviews' findings indicated the students' perceptions of the usefulness of the target structures may influence whether or not learners employ them in writing. The study findings suggest that explicit instruction is helpful for the writers' abilities to produce topic-induced phrases. These findings have implications for ESL writing pedagogy.

Key words: explicit instruction, topic-induced phrases, topic-related vocabulary, ESL writing.

The Role of Vocabulary in ESL Writing

Vocabulary is very important in the successful writing of L2 learners (Ferris, 2015; Folse, 2008; Hinkel, 2004; Nation, 2005). With a rich vocabulary repertoire, ESL writers are better able to express complex ideas using advanced language and to produce readable, coherent prose their readers expect (Folse, 2008; Hinkel, 2004). On the other hand, with impoverished vocabulary, learners are likely to make both poor lexical choices and lexical errors in their writing. Santos (1998) considers lexical errors the most serious errors in ESL students' writing pointing out that "[i]t is precisely with this type of error that language impinges directly on content; when a wrong word is used, the meaning is very likely to be obscured" (p. 48).

Empirical evidence suggests that vocabulary utilized in L2 students' writing may influence the overall quality of an essay (Barkaoui, 2010; Engber, 1995; Ferris, 1994; Harley & King, 1989; Linnarud, 1986; McClure, 1991; Santos, 1988; Song & Caruso, 1996) and that effective lexical choices are contributing factors in the quality of an ESL student's text (Engber, 1995; Harley & King, 1989; Linnarud, 1986; McClure, 1991). Vocabulary is frequently included as a separate component in the rubrics developed as writing assessment tools (see, for example, Jacobs, Harfield, Hughey, & Wormeth, 1981). Similarly, vocabulary is regarded as a factor influencing the overall score an essay receives on high-stakes English language tests (see, for example, the scoring guides for the written portions of the IELTS or iBT/Next Generation TOEFL tests).

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The importance of vocabulary in writing is also seen from the perspective of ESL learners. In a survey that Leki and Carson (1994) employed with 128 ESL undergraduate students to gather data on the student perceived effectiveness of an English for academic purposes writing course, learners reported that it was vocabulary instruction that they had needed the most. Similarly, and more recently, in an interview that Coxhead (2012) conducted with learners of English as an additional language in New Zealand, learners reported the need for technical, academic, or professional words to express their ideas in writing.

The evidence coming from literature on vocabulary and writing, research on the factors contributing the ESL essay quality, assessment tools used in evaluation of ESL essays, and students' perceptions of what needs to be included in the ESL writing instruction emphasize the need for focused attention on vocabulary in ESL writing instruction.

Formulaic Language in The Prose of Expert Writer And ESL Learners

Research is increasingly showing that vocabulary of English written texts is made up of phrases larger than single words that go by various names including formulas, lexical bundles, formulaic sequences, collocations, (multi)word combinations, and (lexical) phrases. Attempts have been made at categorizing the types of recurrent lexical phrases (see, for example, Biber, Johansson, Leech, Conrad, & Finegan, 1999; Lewis, 1997; Thornbury, 2002). However, because of the very many different kinds of multi-word units, there is often overlap between categories (Coxhead & Byrd, 2008; Lewis, 1997). Both comparative analyses of the writing of ESL and native English speakers (Granger, 1998; Yorio, 1989) and comparative studies of ESL and expert, published writers in English (Howarath, 2001; Scott & Tribble 2006) report on the frequent use of multiword combinations in written English. Vocabulary research in corpus linguistics showed that written discourse, specifically academic prose, is marked by frequent and functional use of lexical phrases (Biber, Johansson, Leech, Conrad, & Finegan, 1999; Cortes, 2006; Hyalnd, 2008). Erman and Warren's (2000) investigation of prefabricated language of English speech and writing found that 52.3% of written (and 58.6% of spoken) discourse consisted of multiword combinations.

In the area of research on formulaic language (collocations) in ESL writing, Erman (2009) argues that a writing topic necessitates the use of specific word combinations in a text that adequately examines the topic. She illustrates that in a text on the topic of environment protection, it is expected to encounter phrases such as *protect the environment*, *damage the ozone layer*, *ecological change*, or *economic problems/perspective*. In an event that the text is lacking phrases motivated by a topic, the writing is likely to be viewed as impoverished in content and, as such, ineffective in the treatment of the subject matter. Similarly, Ferris (2015) points out that the use of content vocabulary is important in the writing of ESL learners.

It follows that learning to write effectively on a particular topic requires the knowledge of the phrases necessitated by the topic. However, Erman's (2009) study found that ESL learners employed fewer topic-induced collocations in their essays than the native English speakers did in their writing. Moreover, a further comparison of the compositions written by ESL learners and the essays written by native English speakers in terms of the distribution of different groups of collocations (lexical function, socio-cultural, topic-induced) revealed that it was the production of topic-induced phrases by the ESL students that was particularly low and flawed.

The results of Erman's (2009) study echo the findings of a body of research suggesting that ESL writers' production of multiword combinations is problematic (Granger, 1998; Howarth, 1998; Li & Schmitt, 2009; Scott & Tribble, 2006; Yorio, 1989). ESL writers, specifically those at the lower levels of English language proficiency, tend to copy lexical phrases from writing prompts (Ohlrogge, 2009). Even with extensive writing practice in the target language, many ESL learners continue to produce non-target-like multiword combinations (Li & Schmitt, 2009; Scott & Tribble, 2006), which suggests that learning to use formulaic sequences effectively may be difficult for ESL writers. To facilitate the process of learning to use lexical phrases in writing, the research has been suggesting that ESL writers be provided with explicit instruction (Biber & Barbieri, 2007; Coxhead & Byrd, 2007; Ellis et al., 2008; Folse, 2008; Nattingen & DeCarrico, 1992; Simpson-Vlach & Ellis, 2010).

Explicit Teaching of Lexical Phrases in ESL Writing

In the literature on second language vocabulary teaching, many attempts have been made to help ESL teachers tease apart the complex processes involved in teaching vocabulary (i.e., single words and multiword combinations) and offer ideas for addressing learners' vocabulary needs (see, for example, Coxhead, 2014; Lewis, 1997; Nattingen & DeCarrico, 1992; Thornbury, 2002; Zimmerman, 2009). Research examining ESL students' written production provides some support for possible facilitative effects of explicit teaching. In their longitudinal study investigating how the use of formulaic sequences in the writing of a Chinese graduate student at an English-speaking university develops over a period of one academic year, Li and Schmitt (2009) noted that for their participant, explicit instruction was one of the major sources of acquisition for new formulaic sequences. Mainly, according to the participant's account, thirty-one percent of the total number of different types of newly acquired formulaic sequences used in writing came from the explicit instruction she had received. Twenty years earlier, Yorio's (1989) study that compared the texts written by two groups of learners performing the same task under the same conditions, one consisting of immigrant students residing in US and the other of English majors residing in Argentina found that the learners who had received formal instruction, that is, those in the latter group, showed more accurate use of the formulaic sequences in their writing.

Only few studies have investigated the effects of the instructional intervention in writing. Within the L1 context, Cortes (2006) found that the writing of the university-level students who were taught a selected set of lexical bundles in five short lessons given over a 10-week period did not show major improvement in the use of lexical bundles. However, the survey data collected after the treatment indicated that the students increased their awareness about the importance of the use of lexical bundles in academic writing. Based on the results, the researcher inferred that the students possibly needed more instruction time and more exposure to the lexical bundles to show improvement. In the ESL context, Jones and Haywood (2004) reported that the ESL learners in an English for Specific Purposes program who were explicitly taught certain formulaic sequences during a period of 10 weeks showed no gains in their ability to use formulaic sequences which was measured from writing samples collected at the beginning and end of the term.

Even more limited is the research on the effects of explicit teaching of topic-induced phrases on ESL writing. Although both Lee's (2003) and Lee and Muncie's (2006) studies investigated learners' written production of lexical phrases and reported positive effects o f instructional intervention on vocabulary use in writing, this research examined lexical phrases in conjunction with single-word topic-induced vocabulary and not separately.

Research Questions

To fill this gap in literature, the present study aims to answer the two questions presented below. The first question is addressed through quantitative and the second through qualitative data elicitation and analysis, as described in the next section of the paper.

1. Do the students who receive explicit instruction make more gains in their abilities to use topic-induced phrases in their writing than those who do not?
2. If so, how do the students receiving explicit instruction go about producing topic-induced phrases in their writing?

Methodology

Overview of the research design

This study was a part of a larger study investigating the effects of explicit teaching of multi-word phrases on ESL writers. The research project uses a quasi-experimental design in which the study participants are assigned to

treatment and contrast groups based on the class in which they are enrolled. The study was conducted in writing classes for intermediate-level proficiency students at an Intensive English Program (IEP). Instructional periods in the IEP are divided into terms of eight weeks, with two terms occurring each semester. The writing teacher taught the contrast group first and then the treatment group.

The class focused on writing argumentative essays. For the writing course, participants wrote three multi-draft essays. Both groups followed the same syllabus. They read and discussed the same reference materials prior to submission of the final draft of each essay. They completed the same activities from the textbook for the course and were taught by the same instructor, who was different from the researcher, to reduce the effects of the teacher variable on the results. The contrast and treatment groups were given the same composition assignments.

As noted previously, there were three multidraft essays students wrote for the class. This study concerns the students' essays written on the topic examined third for the class. The treatment group was taught topic-induced phrases on the topics of the two other essays prior to submission of their respective final drafts.

The contrast group received no explicit instruction on topic-induced phrases. The teacher was directed to instruct students in this group as she had been doing prior to the participation in the present study. It is possible, however, that the teacher explained the meaning of specific vocabulary including the target items when students asked about or appeared confused by some words during post-reading activities and in-class discussions. The group was exposed to the target phrases only through reading, in-class discussions and textbook activities, that is, in a manner of delivery that the teacher had been using prior to the present study.

Besides gathering data for quantitative analysis, the study attempts to glean insights into the approaches learners used for written production of the target phrases, specifically the strategies that would distinguish between the learners whose production was limited (low performing) from those whose production was more extensive (high performing). For this purpose, individual semistructured interviews were conducted at the end of the treatment with a subset of students from the treatment group. The interview questions have a reference to the students' writing topic and are as follows:

a) How did you go about incorporating the phrases about international adoptions in your first/second essay?;

b) In the writing class, your teacher used many different activities to help you learn the phrases on the topic of international adoptions. In your opinion, which of these activities helped you learn the phrases best?; and

d) Which of the activities were not helpful to you?

The wording and sequence of the interview questions remained the same for each informant; however, probes were used to elicit additional information as the need arose.

Participants

Data was collected from 54 ESL students from five intact high-intermediate writing classes at an Intensive English Program (IEP) in the western United States. The ESL courses at the IEP are designed to support development of language skills for academic studies primarily, but also professional communication. The study participants had all taken a standardized English proficiency placement exam for the IEP. Some directly placed in the high-intermediate level class by the internal placement test and others moved from the intermediate to the high-intermediate level after successfully passing the final exams in the previous level. There were 19 students in the contrast and 35 students in the treatment group. The participants came from various language backgrounds (Arabic=11, Bambara=1, French=1, Japanese=26, Korean=6, Mandarin=1, Portuguese=1, Russian=1, Spanish=2, Thai=2, and Turkish=1). 41% were male and 59% were female. 46% of the participants were under the age of 20, 50% were between the ages of 21 and 30, 2% were between the ages 31 and 40, and 2% were over the age of 41.

Target Items

The target topic-induced word combinations were taken from the passages in Numrich's (2009) *Raise the Issues: An integrated approach to critical thinking*, Unit 3. The texts were a part of required reading materials on the topic of

international adoption. The target items were initially located by using KeyWords extractor v.1 (2007), N-gram Phrase Extractor v.4 (Cobb, 2010) and subsequently submitted to manual investigation. Both programs were available at no cost at www.lexitutor.com. KeyWords Extractor v.1, a lexical computer software used to identify single words that with unusual frequency appear in a text when compared to a reference, calculates the word frequencies on a per million word basis and uses the Brown corpus, a corpus of one million words of American English, as a reference. The N-gram Phrase Extractor program generates a list of n-grams occurring with the frequency of two and higher in the texts under investigation.

The words identified through KeyWords Extractor v. 1 (2007) were manually compared to the formulaic sequences produced by N-gram Phrase Extractor (Cobb, 2010) analysis because there were several instances in which the words the former program identified as key words were not found in the list generated by the N-gram Phrase Extractor program. Since the writing assignment required that the students write in favor of or opposition to international adoptions, it was important to select word combinations that could be used in support of both sides of the controversial issue. The subsequent manual investigation yielded additional word combinations that were included in the final list of target vocabulary items. There were 15 topic-induced word combinations used in explicit instruction (i.e., *a victim/s of violence; adoption agency/ies; corruption in a country/adoption; criteria for adoption; foreign adoptions; inter-country adoptions; international adoptions; orphaned children; place a child for adoption; place a child in a foreign family; prospective adoptive parents; reopen adoption to foreigners; requirements for adoption; to be adopted into; to be placed with a family/families*).

Materials and Procedures

The pretest was administered at the start of the term to cause the least disruption to the course schedule. On the last day of the first week of classes, the participants were directed to read three texts from the third unit in *Raise the Issues: An integrated approach to critical thinking* (Numrich, 2009), the textbook for the course. The fourth text was a completed fill-in-the-missing-words passage from the same textbook section. The assigned readings were on the topic of international adoptions. The readings were accompanied by a set of comprehension questions that were mainly included to improve the likelihood of students' reading the assigned texts prior to class. The students were further encouraged to complete the readings by being informed in the directions for homework that their preparation for the class was expected and that their success in class was dependent on their completion of homework assignments. On the first day of the second week of instruction, as the course instructor devised, the pretest was administered. The students were given an in-class 40-minute argumentative essay to write on the topic of international adoptions. They had access to the reading materials on the topic. Essays were handwritten and collected in the classroom.

The treatment was conducted at the conclusion of Week 7 and start of Week 8, the final week of the term as presented in Table 1. Over a period of four days, the treatment group received training on 15 target structures. The intervention began when the treatment group was given a separate copy of the texts from Unit 3 in *Raise the Issues: An integrated approach to critical thinking* (Numrich, 2009) in which the target topic-induced word combinations were bolded. The students were explicitly told that the bolded phrases were important in effective discussions of the topic of international adoptions and were instructed to read the texts carefully outside of class. In class, subsequently, the students were first engaged in completing activities aimed at their ability to produce the topic-induced phrases in controlled situations and then in the activities that allowed students to produce them in their speech and writing.

Table 1
Overview of the Research Design

Week	Treatment group	Contrast group
2	Data collection (pre-test)	
7-8	Explicit teaching	No explicit teaching
8	Data collection (post-test)	

Over a period of four classes, the students completed five multi-step activities (see Table 2). They spent about 60 minutes of class time on the activities. The teacher referred to the topic-induced word combinations as "phrases", monitored students' production of the target phrases and provided feedback when necessary.

At the start of the first class, students were given a passage of 249 words on the topic of international adoptions to read as many times as they could within a five-minute time frame. The passage was created by the researcher based on the reading materials from the course textbook. After the students read the text, they were presented with the same text but with segments of the target vocabulary removed. They were asked to fill in the missing word parts and upon completion to compare answers with a partner. Next the students were presented with a set of questions to productively recall the target items.

At the end of the second class, the treatment group was asked to do a matching cloze-type activity consisting of selected topic-induced word combinations offered in a box and referred to as a "word bank" and sentences with blanks. The activity required that students a) examine selected phrases in a word bank and sentences below the phrases and b) complete the sentences using the items in the word bank. They were directed to make changes to the phrases in order to produce grammatical sentences. Students worked in pairs.

In the next class, students were engaged in the 2/1/30 activity which is a modified version of 4/3/2 activity (Nation & Gu, 2007). They sat in two rows facing one another. The learners sitting in one row were assigned the role of a speaker and those siting in the other row the role of a listener. They were given a copy of the text used in the activity from previous day to read as many times they could within three minutes. After reading the passage, the speakers were directed to retell the passage to one partner within 2 minutes, to another within one minute, and finally to the third within 30 seconds. The listeners were directed to listen, take notes, and not to interrupt the speakers. Having delivered their speeches to three different partners, learners changed roles. When done, learners were asked to briefly review their notes and compare their own performance to the performance of their partners when doing the speaking task.

The final activity was entitled "Build an argument." It was a two-part writing activity. The students worked in pairs. First, the students were directed to utilize a selected subgroup of target word combinations in building three arguments and write them down. One argument had to be written in support of international adoption. The second argument had to be created in opposition to international adoption. For the third argument, students could choose whether to support or refute the controversial issue. Once the writing was completed, students underlined the target phrases in the written arguments and exchanged them with another pair of students for peer review. In the second part of the activity, students were asked to revise and edit the three arguments completed by the other group to the best of their abilities. They were asked to focus their attention to the use of the target phrases (those that had been underlined in the arguments).

All of the activities as a type (e.g., matching, fill in the blanks, build an argument, etc.), with the exception of 2/1/30 activity, were piloted with a group of high-intermediate students not included in the study. Based on the input received from the teacher, the matching activity was modified from a group to a pair activity and less material was removed from target phrases in the fill-in-the blanks activities.

Table 2
Overview of the Activities by Lessons for the Treatment Group

Lesson	Treatment group
1	5-minute read and word completion
	Answering questions
2	Matching cloze
3	"2/1/30" activity
4	"Build an argument" activity

The posttest was administered at the end of the treatment, which coincided with the end of the term. During the posttest, just as writers have access to their writing resources, participants in the study were allowed

access to the reading materials on the topic of international adoptions required for the course. The texts accessible to the treatment group had no target phrases in bold type. The students wrote essays by hand. The essays were collected in the classroom.

The contrast group, as noted previously, read and discussed the same texts as the treatment group. While the treatment group was receiving explicit instruction, the contrast group was engaged in extended discussion tasks based on the content of the reading materials, analysis of the arguments presented in the texts, and brief writing-oriented tasks, as the teacher devised.

Instruments for Quantitative Data Elicitation And Evaluation

To examine the possible gains in learners' abilities to produce topic-induced word combinations in their writing, students were given an in-class 40-minute argumentative essay to write on the following prompt from the textbook:

> "Some people agree with Thomas Atwood, the President of America's National Council for Adoption, who states: "National boundaries should not prevent abandoned children from having families." Others take the position that orphaned children should remain in their home countries. What is your stand on the issue of international adoption? Should a country allow international adoptions or limit adoptions to domestic adoptions only?"

For the assessment of the production of topic-induced word combinations in writing, a rubric, based on the scale developed by Jones and Haywood (2004), was designed (see Figure 1). The rubric follows:

3 - correct phrase; spelling issues possible but cannot be mistaken for the issues with inflectional and/or derivational affixation;

2 - correct phrase; problems with inflectional morphology (e.g., *reopen adoption to foreigner* instead of *reopen adoption to foreigners*)

1 - incorrect phrase but an attempt at production of correct phrase evident which can be described as one of the following:

a) Problems with derivational morphology (e.g., *victims of violent* instead of *victims of violence*)

b) Substitution of a preposition (e.g., *place a child of adoption* instead of *place a child for adoption*)

c) Omission of a function word inside the phrase (e.g., *place a child adoption* instead of *place a child for adoption*)

0 - no attempt to produce a target phrase OR any combination of the issues described under the rating of 1.

Figure 1. Scale for Measuring the Production of Topic-Induced Word Combinations in Writing.

Scoring and Analysis

The data for the study included the scores students received on the pre- and posttests on the production of topic-induced word combinations in an unannounced in-class 40-minute argumentative essay. The pre- and posttest essays were collected from the students, typed, and saved on a computer. An independent evaluator and the researcher compared the electronic versions of the essays to the handwritten essays to ascertain that they were entered correctly. The examination of the typed and handwritten essays revealed some minor inconsistencies. These inconsistencies were corrected so that the essays used in the subsequent analysis accurately represented the content of the handwritten in-class essays. The essays were coded and mixed to keep the data blind to the researcher. The researcher conducted a lexical analysis of the pre- and posttest essays to extract the target topic-induced word combinations. The average number of words per essay produced by the students in the contrast group was 281 at the pretest and 366 at the posttest. The average number of words per essay for the treatment group was 277 for the pretest and 359 for the posttest.

Two computer programs, namely, Text-Lex Compare v.2. 2 (Cobb, 2010) and Microsoft Windows version 2007, were used for identification of the target topic-induced word combinations in participants' compositions. While the former was employed to detect the presence of the target items in the students' texts, the latter, with its search feature "Find", was used to identify the location of the target structures in the participants' compositions. Each time the target structure was located, the researcher examined the topic-induced word combination to determine whether a) the form and use of the structure matched the form and use of the target item; b) the word combinations were a part of students' prose or the quoted and/or unquoted reference materials; c) there were instances of an overlap of two or more target items. The researcher bolded all of the target items in the document and recorded her notes in the table along with the results of the Text-Lex Compare program.

After the topic-induced word combinations identified by the Text-Lex Compare program were located and marked in bold in the text, the researcher continued the examination of the compositions using the Microsoft Word program and its feature "Find" to locate possible flawed structures (e.g., issues with spelling, problems with morphology, dropped words within the formulaic sequences). The search was conducted by entering partially realized forms of the target items as search criteria. To illustrate, when the essays were examined for the occurrences of *victims of violence*, the following search criteria were submitted: *victim* and *violen*. The topic-induced phrases that appeared in the essay prompt (*orphaned children, international adoption*) were included in the analysis.

The process of identification of the target items in the students' compositions was repeated three times over a period of two days to assure the reliability of scoring of data. The researcher took 15- to 30-minute breaks between searches after every 5 target items.

After the researcher located and bolded the target structures in the students' compositions, she reviewed the essays to exclude from the analysis the word combinations that appeared to be a part of the material borrowed from reference sources and not student-generated text. The researcher evaluated the formulaic sequences using the scoring guide presented in Figure 1. The final score given to an essay was a sum of the scores given to each phrase occurrence in the text. If there were multiple occurrences of the same topic-induced word combination, an average of scores assigned to each occurrence was computed and included in the calculations of the final score.

The data for the study included the scores students received on the pre- and posttests on the production of topic-induced word combinations in an unannounced in-class 40-minute argumentative essay.

Results

Differences Between Contrast And Treatment Groups

Table 3 offers the means and standard deviations for the scores participants received on the production of topic-induced word combinations in essays at the start and end of the term.

Table 3
Mean Scores and Standard Deviations for both Measures by Group

Measure	n	M	SD	n	M	SD
	Contrast			Treatment		
Pretest	19	4.08	2.16	35	3.79	1.90
Posttest	19	4.84	2.27	35	8.71	5.40

The research question that motivated this study was whether the students who received explicit instruction improved their abilities to use the target topic-induced phrases in writing more, from pre-test to posttest, than those who did not. To compare the gains over time between the two groups, an ANOVA with repeated measures was performed with time (pretest vs. posttest) as a within and group (treatment vs. contrast) as a between subjects factors. The assumptions of normal distribution of data and the homogeneity of variances were not met.

Larson-Hall (2016) explains that the problem with violating these assumptions is that statistical differences that exist between groups of participants may not be found (p.100). The analysis for this study finds statistically significant results as described below.

There was a statistical interaction between group and time, meaning that the groups did not perform the same way at the two time periods ($F(52,1=10.84$, p=.0017886, generalized eta-squared =.08). The interaction between group and time accounted for 8% of the variance in the model. Because there were only two choices (one for time and another for group), data about sphericity was not offered.

There was also statistical effect for time ($F(52,1)=32.75$, p<.0001, generalized eta-squared=.20). In this model, time makes a bigger difference to the variance, accounting for 20% of the variance. Since there are only two times tested, from the mean scores (see Table 1), it is concluded that the participants did better on the posttest than the pretest. There was a statistical effect for group (treatment vs. contrast), ($F(52,1)=5.27$, p=.03, generalized eta-squared=.06). The effect for group was not as great as the effect for time, accounting for 6% of the variance. Since there are only two groups, from the mean scores (see Table 1) it is concluded that the treatment group performed better than the contrast group.

The results suggest that that both groups made gains in their abilities to produce topic-induced word combinations from pretest to posttest, but that the treatment group had greater gains than the contrast. Such findings suggest that, at least for the intermediate ESL writers, those students who receive direct instruction seem to improve their abilities to employ the topic-induced word combinations in their compositions more than the learners who do not.

Interviews

Follow-up interviews were conducted with a subset of participants from the treatment group who were selected on the basis of their abilities to produce topic-induced word combinations on the posttest. Three informants were male and two were female. Interviews followed a semistructured guide comprised of open-ended questions about the students' backgrounds, academic goals, English language training, and, more importantly, about the strategies students applied to producing the phrases and the attitudes towards the instructional intervention (see section *Overview of the research design* for specific questions). Interviews were conducted and tape-recorded by the researcher. The researcher listened to the information as many times as was necessary in order to represent the information accurately and take notes while listening. The researcher analyzed the data from the interview by looking for patterns in the responses of the informants. Pseudonyms are used for all of the informants to ensure confidentiality. Their language and education profiles are presented in Table 4.

Table 4
Informants' Language and Education Profiles

	Al	Jumi	Jack	Jihan	Ju
Language	Japanese		Arabic	Turkish	Portuguese
Educational Background	High-school diploma from a home county			Master's degrees in business and in business administration from a home country	Bachelor's degree in business from a home country
Future plans	University education in home country	University education in the US		Employment in home country	Employment in the US

Al was a recent high-school graduate from Japan. He had lived in the US for two months. His academic goal was to pursue a degree in teaching English as a foreign language in his native country. Prior to enrolling in the ESL classes in the US, he had had little opportunity to write extensively in English. He reported that when writing the in-class essay at the beginning of the semester, he was focused on the content of his composition and

the ideas to use in support of his position on international adoptions; however, when writing in-class on the same topic at the end of the semester and after having been taught the target phrases, he was focused more on the vocabulary, paying attention not only to what to say but also how to say it. He used the target phrases in the end-of-the-semester timed essay because they were important in the discussion of the topic and because he felt that the phrases could help him express ideas clearly. His attitude towards all of the in-class vocabulary activities was positive. He felt that all activities provided substantial practice in production. From the course syllabus and previous writing experience in class, he knew that he would be expected to write another essay, so he paid attention to the activities in class.

Jumi, similar to Al, recently graduated high-school in Japan. She had been studying English in the U.S. for 10 months during which time she had completed four terms at the IEP. Her plan was to study sports medicine at a university in the United States. Although she had taken four writing classes prior to participation in the study, she found writing difficult. She explained that the lack of knowledge on the essay topic and of the words to use to discuss the topic were reasons for a limited use of the topic-induced phrases in the in-class pretest essay. This was, however, not the case on the posttest when she employed the target phrases in her composition. Among the activities used in teaching topic-induced phrases in the writing class, Jumi found the one with an immediate connection to her own writing the most useful. When discussing the pros and cons of international adoptions, she was in favor of inter-country adoptions, which is why she found useful writing an argument for foreign adoptions, a segment of the *Build an Argument* activity and why she viewed negatively the other activity segment asking her to write against inter-country adoptions. Speaking under time constraints for the 2/1/30 activity was not enjoyable. The remainder of the activities used in class she found moderately useful.

Ju was a female participant from Brazil. She held a bachelor's degree in business from her native country and had been attending ESL classes at the IEP for thirteen months with the goal of finding employment in the US. Similar to Jumi and Al, Ju was searching for ideas to use in the essay paying limited attention to the vocabulary to use. On the posttest, however, having realized that the target phrases were important and necessary in a discussion of the topic, she purposely used the target phrases and alternated synonymous phrases (e.g., *inter-country adoption, foreign adoption*) to improve the quality of her text. Ju reported learning the target phrases on the topic of adoption in class and was proud that at posttest, she was able to write them down from memory. She found the phrases taught in class very useful because they related to the topic of the essay she would be asked to write next. She pointed out how the teacher had been using them in class, how the peers produced them in class discussions, and how the authors employed them in the texts she read. She saw a purpose in using the topic-induced phrases in her writing. Similar to Al, she reported that the phrases were important. They helped her express ideas clearly and talk about the same idea without repeating the same phrase. She concluded her answer to the question on how she went about using the target phrases in a downward tone indicating that there was nothing more to be said except *I used them because I had to use them!* Ju reported that among the activities used in teaching topic-induced formulaic sequences the activity *Build an Argument* was the most useful and could not think of any activities used in instruction that were not helpful to her.

Jihan was a male participant from Turkey. He held one master's degree in business and another in engineering. He had been in the US for about nine months. He had completed four sessions of ESL classes. His professional goal was to find employment in a prestigious foreign firm in his home country. He explained that the phrases taught in class were not the vocabulary he felt he needed to learn. The vocabulary he explored and focused on, was the vocabulary he self-selected either because the items were new or interesting to learn. He said that when writing essays for the class, he was focusing on creating a well-organized, unified, and coherent essay; it was a problem for him to focus on vocabulary. His approach was to think in his native language and then translate to English, paying special attention to the writing conventions taught in the writing class. Although Jihan's attitude towards the instruction on topic-induced phrases in the writing class was generally negative, he thought that *Build an Argument* activity was useful.

Jack was a male student from the United Arab Emirates. He had been in the United States for a year and three months. His goal was to continue his academic studies in the United Sates. He did not use the target

phrases in his writing because he wanted to talk about adoptions in general not necessarily about international adoptions. His attitude towards the activities used in instruction of topic-induced phrases was generally neutral but he, similar to other informants, had a more positive attitude towards the activity *Build an Argument.*

In summary, while each interview participant reported difficulties in focusing on the vocabulary aspect of their writing at pretest, only those with a positive attitude towards instructional intervention at posttest, knew the content enough to allocate attention to the use of target phrases. This group of students concurred that the topic-induced word combinations taught in class helped them express their ideas better and clearer, which is one of the main reasons why students employed them in writing. On the other hand, those who failed to recognize the contribution the target phrases make to the discussion of the topic as well as to appreciate most of the in-class vocabulary-focused activities, also failed to use the topic-induced phrases in their writing. Interestingly enough, when a vocabulary-focused activity was both integrated with the writing task and also closely aligned with the major writing assignments, all of the interview participants expressed appreciation for the teaching strategy.

Discussion

The findings of this study suggest that ESL learners can improve their abilities to use topic-induced word combinations in writing when reading texts on a given topic and discussing their content with peers in class. These results are not surprising. The target phrases the study considered are essential for an effective discussion of a topic (Erman, 2009); that is, when relatively few topic-induced phrases are used, they key a reader into the content of the text. Students seemed to recognize this. Also, in class they had exposure to the target items; for four days, they read on the topic and discussed the readings. Because the students had access to the reading materials as they wrote their essays both at pretest and posttest, it cannot be claimed that they produced the target phrases from memory. This may apply particularly to the production of the two target phrases (*international adoption* and *orphaned children*) that were additionally present in the writing prompt (see section *Instruments for qualitative data elicitation and evaluation*) given that the previous research reports that ESL writers often borrow lexical phrases from the writing prompts they are given (e.g., Ohlrogge, 2009), There were also no participants from the contrast group interviewed to provide further evidence on how they went about using the phrases in their essays. What we do know, however, is that through extended exposure they became familiar enough with the target phrases to recognize their usefulness and employ them in their own writing. What we still need to find out through a qualitative analysis is which types and forms of the target topic-induced phrases the students in the contrast group used in their essays.

The study findings also suggest that the ESL students who receive explicit instruction improve their abilities to employ the topic-induced word combinations in their compositions more than the learners who do not receive this instructional intervention. These findings, to an extent, support the findings of Lee (2003) and Lee and Muncie (2006) on the positive effects of direct instruction on the topic-related vocabulary use in writing. The findings of this study were a result of carefully planned explicit instruction consisting of giving students reading materials with topic-induced word combinations in bold type; stressing the contribution of the target phrases to the message of a text; having students produce the topic-induced phrase in controlled situations; directing them to read, listen, speak, and write the target phrases in an activity under time constraints; and asking them to use the target phrases in a writing task that is aligned in purpose with the very next major written assignment. Another very important feature of the instructional intervention was that the target phrases were assumed to be useful to L2 writers because they had an immediate application to their writing. The findings of the study support the call for integration of the explicit teaching of vocabulary in writing (i.e., Coxhead & Byrd, 2007; Folse, 2008; Schmitt, 2000), particularly the teaching of vocabulary students need for their writing (Folse, 2008). Where discrete differences in the use of the target topic-induced phrases lie between the two groups of students may be more directly observed through a qualitative analysis of the types and forms of the target topic-induced phrases in the students' essays. It might be that the students receiving direct instruction were able to use a greater

variety of the phrases with, perhaps, better accuracy in their end-of-the-term essays. If so, it might be that the instructional intervention helped students improve the vocabulary use overall in their essays. However, whether or not the use of the topic-induced phrases helped students in the contrast group improve lexical quality of their writing remains to be investigated.

As noted previously, the students were allowed reading materials as they wrote their essays, so it may or it may not be the case that they were producing the phrases from memory. What we do know is that due to explicit teaching, they recognized the relevance and utility of the target phrases to their own writing more than the students in the contrast group did; and thus incorporated the phrases better in their compositions written at the end of the term. This suggests, as previous research within the contexts of L1 (Cortes, 2006) and L2 (Jones and Haywood, 2004) academic writing has indicated, that due to direct instruction, students may increase their awareness about the importance of the use of multi-word combinations in writing. It is possible, however, that some of the students in the present study learned, due to the treatment, the target phrases well enough to produce them from memory. One of the informants who was considered a high performing participant based on her ability to use the target phrases at posttest, claimed to have recalled the target items from memory.

The interview data provided details about the students' strategies for production of the target phrases in writing, their attitudes towards the target phrases, and the activities used in explicit instruction. The participants concurred that their written production was affected by their perceived need to employ the target phrases in their writing. The informants who understood how relevant the target phrases were to the topic their essays examined, were those who employed them more in their writing, and those who did not, chose, for the most part, to disregard them. In addition, it seemed that most of the time, the production of the target phrases was motivated by students' intention to showcase knowledge on the topic.

Additionally, helping students realize the utility of the topic-induced phrases in the reading materials on a specific subject is worth noting. Some students were alerted to the importance of the topic-induced phrases upon receipt of the reading materials with the target phrases in bold type reoccurring in a single and/or across multiple texts.

With respect to the strategies for production of the target phrases in writing on the first timed essay, students grappled with generating content for their essays which ultimately affected the vocabulary choices they made, so fewer target phrases were used. On the second timed essay, the high performing students felt they knew the content enough to pay attention to how to convey meaning with precision and clarity that topic-induced phrases allowed.

Relative to the activities used in the instructional intervention, the interview data indicate that high performing students value all of the activities focusing on the topic-induced phrases while low performing students enrolled in writing classes appreciate activities with a direct connection to their own writing. All of the informants, low performing and high performing alike, noted that one activity that resembled the upcoming major assignment in purpose and content was most useful.

There are several limitations to be noted in the present study. First, the number of participants in the study was small and they were all at one level of language proficiency (i.e., high-intermediate). To obtain more generalizable results and to compare the effect of treatment across proficiency levels, future research would need to include more participants at various levels of language proficiency. In addition, since the reading materials were accessible to the students during the writing sessions, the study could not gather the information on the effects of explicit instruction on the students' abilities to produce topic-induced phrases in free production. Third, in an effort to minimize the task effects on the students in the treatment group and also to avoid possibly alerting students to the study begin conducted, the target phrases related to the topics of the two other essays were explicitly taught prior to submission of their respective final drafts. Although the topic-induced phrases concerned topics different from the one used in data collection, the explicit teaching sessions were similar to the treatment activities before the data collection in that that the students received reading material with the target phrases marked in bold and completed activities that focused on the production of the target phrases. Future research could control for this variable. Fourth, in an attempt to minimize the teacher-investigator variable in the

study, the course instructor was different from the study investigator. The researcher was present on the days when the data for the study was collected. She was in regular contact with the course instructor to provide materials for the study, to confirm with the teacher that vocabulary was not explicitly taught during the data collection from the contrast group, and to receive reports on the delivery of the explicit teaching sessions; however, observations of actual teaching were not conducted. Future research should consider including observations of the teaching sessions or possibly recording the session for later viewing and review. Fifth, the present study did not examine descriptively the types and forms of the target topic-induced phrases in the essays written by the contrast and treatment groups nor did it explore whether and to what extent the treatment had an impact had on the students' quality of writing. Further research on the aforementioned limitations is warranted to refine our understating of the effects of explicit teaching of the topic-induced phrases on ESL writers.

Conclusion and Implications for Practice

Many ESL writing teachers would agree that in order to write well, their students not only need to use words of various sorts but also know the ways in which these words combine with other words in context. As students generate content on a specific topic, if they are to achieve precision and maturity in writing, they need to use topic-induced lexical phrases. The present study was carried out to investigate the effects of explicit teaching of topic-induced multi-word combinations on ESL writers. The study found that, while both groups of ESL writers improved over time, it was the students who received explicit instruction that made more gains in their abilities to use topic-induced multi-word combinations in their writing that those who did not. Through interviews with selected students from the group receiving instructional intervention, the study found that learners' perceptions of the usefulness of the topic-induced phrases may influence whether or not students employ them in writing. With respect to the activities used in explicit teaching of topic-induced phrases, the interview's findings indicated that students appreciated tasks most closely aligned in purpose with the upcoming major written assignments.

In terms of instructional practice, the present study brings attention to the role explicit teaching contributes to ESL students' abilities to produce topic-induced phrases in their writing. Teachers should be aware that when provided alongside opportunities to read and discuss reading materials on the topic of writing, direct teaching of topic-induced phrases seems to benefit ESL writers. While some learners may employ the target phrases primarily to improve clarity of expression and ideas and others to springboard their own writing, they all generally consider topic-induced phrases important to the discussion of the topic in their essays.

In order to plan for explicit instruction, teachers need to identify and select target topic-induced multi-word phrases. The target structures in the present study were extracted from the materials students read in preparation for the writing assignment. The reading materials were, thus, used both as scaffolds in the writing process as well as the contexts of use of the target topic-induced phrases. In the process of identification of the target topic-induced phrases, teachers may, among others, use the software programs noted in this study. Writing teachers who may feel apprehensive about the use of corpus-based tools could, perhaps, working together with one or more colleagues review selected reading materials with the following two questions in mind: a) Which words related to the content of this text, would I use in my composition on the topic of . . . and b) Which word partnerships do these words hold? The first question, teachers would complete by including the topic of the essay assigned to the students. The second question requires that they read individual sentences in which the target words appear to examine the contexts both to the right and to left of the target word looking for partnerships the target words hold. Upon review, the instructors would compare their data to select for explicit instruction those topic-induced multi-word combinations that are shared between the lists.

Having created a topic-induced phrase inventory, writing instructors would then plan how to go about teaching the phrases explicitly to stimulate students' production of topic-induced phrases in compositions. With respect to the approach to explicit teaching of topic-induced phrases, this paper suggests that writing teachers provide students with reading material in which target structures were made salient, direct learners to read and reflect on the texts, engage students in activities in which they read, listen, speak, and write the target phrases.

Relative to the design of tasks that integrate vocabulary and writing, teachers may want to link them as closely as possible to the purpose for which students are writing their major assignments. By so doing, they are more likely to contextualize explicit teaching of the topic-induced word combinations thus making instruction meaningful to the students.

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