

A corpus-based teaching of lexical bundles to enhance writing skills of prospective Turkish EFL teachers

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Abstract

Despite the surge in lexical bundle instruction in EFL studies, very little research has looked at how explicit lexical bundle instruction affects prospective Turkish EFL teachers' academic writing abilities on a quantitative level. As a result, the purpose of this study is to determine whether teaching lexical bundles has an impact on developing prospective Turkish teachers' writing skills in terms of accuracy and appropriacy. Thirty aspiring EFL teachers who were enrolled in Tokat Gaziosmanpaşa University's ELT program participated in the study. They were all 1st-year students taking academic writing classes. As a pre-test and post-test assignment, participants were to create an argument paragraph and data was collected with assignment worksheets. A paired-sample t-test was used to compare the writing scores of the participants before and after the lexical bundles' instruction session to see if there was a statistically significant difference between the two. For accuracy, the researcher used Colovic-Markovic's scoring matrix. Results were in favor of using lexical bundle instruction in EFL studies.

Keywords: EFL, lexical bundle, Turkish teachers, writing skills;

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1. Introduction

Academic corpus analysis has shown that multiword combinations are frequently used in the written output (Biber & Barbieri, 2007; Biber et al., 2004). Given that lexical bundles made up 52.3% of written conversation (Erman & Warren, 2000) for at least three reasons, learning these common word combinations is important for improving one's academic writing abilities: Lexical bundles are a crucial component of the structural material and are typically repeated; second, lexical bundles are defining indicators of successful writing since they are widely employed; Last but not least, these bundles combine grammar with vocabulary, providing the lexico-grammatical foundations of a language (Coxhead & Byrd, 2007).

The endemic utilization of multi-word combinations in the academic register, according to some academics, indicates a professional, whereas the rare usage of these expressions indicates inexperienced writers (Cortes, 2004; Hyland, 2008; Chen & Baker, 2010; Teng, 2020). In this context, Cortes (2004) argues that the use of particular lexical bundles is a marker of a skilled language user. Similar to the users, Ellis et al., (2008) assert that frequently used lexical bundles result in a natural language. There are fundamental disparities between how learners and native speakers employ lexical bundles in different fields, as shown by numerous studies on academic writing (Adel & Erman, 2012; Belghalem & Melgani, 2022; Chen & Baker, 2010; Cortes, 2004; Li & Schmitt, 2009; Ucar, 2017).

According to Adel & Erman's (2012) study, foreign speakers exhibited a smaller list of frequent formulaic sequences than native speakers. In addition, according to Chen & Baker (2010), the academic papers of students demonstrated the narrowest repertoire of referential lexical bundles and over-utilized a few terms. On the other hand, the skilled writers employed the most diverse list of lexical bundles. Furthermore, according to Cortes (2004), students seldom ever utilize these expressions in their written output, and when they do, some of the bundles they use do not correspond to those used by native authors.

In this regard, the results of this research contradict Biber & Conrad's (1999) assertion that these multi-word expressions "being so prevalent, it might be believed that lexical bundles are simple expressions and that they will thus be acquired readily in the natural process of language learning." It does not appear that learning and using lexical bundles correctly follow a natural process (Cortes, 2006). Although these terms are often employed in academic writing, non-native writers frequently encounter difficulties when attempting to include the lexical bundles in their writing. Due to this, students are not exposed to these expressions in reading materials frequently enough to learn how to properly and effectively use lexical bundles in their writing (Cortes, 2006). In this connection, Cortes (2004, 2006) claimed that a lack of formal teaching of the target bundles in academic writing may have contributed to learners' keeping away from employing lexical bundles and the disparity of these expressions between non-native and native authors. It is possible to teach lexical bundles specifically to help students learn these recurrent expressions (Bui & Luo, 2021; Öksüz et al., 2021; Özüdoğru & Çakır, 2021).

Nation (2001) lists noticing, memory, and generative usage as the three main psychological processes for learning a term in this respect. When a pupil is aware that a term is an important part of the language, they become conscious of it. The second process is retrieval, which involves recalling the intended meaning when reading and listening or the proper form when speaking and writing (Park, 2020; Jwa, 2018; Barrot, 2021). Generative usage, which occurs "when previously met words are later met or used in ways that differ from the previous meeting with the term," is the final key process identified by Nation (2001) The discipline of vocabulary development was used for a guide on how to teach morphological bundles due to the lack of research on the learning of lexical items in writing production by ESL and EFL learners (Jones & Haywood, 2004; Adolphs & Durow, 2004).

1.1. Conceptual Background

Cortes (2006) focused on lexical bundle instruction for college students taking a writing-intensive history course. In 10 weeks, the researcher created five 20-min micro lessons. The students were all fluent in English. These mini-lessons contained activities, fill-in-the-blanks, and examples from articles that were contextualized. According to the study's findings, there were no changes between pre- and post-training for the creation of lexical bundles even though participants were aware of these formulaic sequences. The scholar suggested that the issue may be due to the short duration of the micro lessons, which did not allow students to expand on their existing understanding of lexical bundles in a useful way. The second factor may consist of the kinds of exercises that are not the best for encouraging students to include these terms in their writing.

In addition, Čolović-Marković (2012) examined how explicit formulaic sequence training affected writing in second languages. The study examined whether explicit instruction would have an impact on students' capacities to create the appropriate formulaic sequences under controlled (c-tests) and uncontrolled conditions. An experimental and control group were included in the study's quasi-experimental design. Participants in the study were placed in writing classes as part of the university's intensive English program. The study's findings showed that the students' production of academic formulaic sequences in a controlled setting, as well as their production of topic-induced formulaic sequences in controlled and uncontrolled settings, was significantly impacted by explicit instruction in formulaic sequences, but that production of academic formulaic sequences in an uncontrolled setting was unaffected.

Iranian advanced Teaching English as a Foreign Language students' writing abilities as well as their opinions toward the consequences of the formal training of lexical bundles were both examined by Kazemi et al., (2014). Twenty students pursuing their MAs in applied linguistics took part in the research. Despite the little treatment period, the results showed that the participants' writing scores significantly improved from the pre-test to the post-test. According to the questionnaire's findings, even English language students at the highest levels are unfamiliar with lexical bundles and have not received any instruction in their use. The participants stressed the importance of lexical bundle teaching and stressed the urgent need to incorporate these expressions into the process of learning foreign languages.

AlHassan and Wood (2015) also looked at the impact of targeted training of formulaic sequences on developing academic writing abilities in second language learners. Twelve students made up the participants, with backgrounds in Arabic, Spanish, Turkish, and Mandarin, as well as competence levels ranging from lower-intermediate to upper-intermediate. The results of the study showed that as compared to pre-test results, explicit formulaic sequence training resulted in a statistically remarkable enhancement in the frequency of target multi-word combinations in second language learners' academic works. The researchers also came to the conclusion that thorough training coupled with diligent practice not only facilitates target bundle acquisition but also guarantees target bundle retention in writing.

Similar research was conducted by Latifi & Afraz (2015) on the influence of explicit lexical bundle training on the improvement of EFL learners' writing skills. Fifty Iranian pre-intermediate students were randomly assigned to one of two groups: The experimental group or the control group. The control group received a placebo writing skill instruction whereas the experimental group received specific instruction on the target lexical bundles. The findings led to the conclusion that specific training was very beneficial for pupils in developing their writing abilities.

Whether vocabulary-focused education would improve students' awareness of and usage of academic formulaic sequences was another question Peters & Pauwels (2015) investigated in detail. The study's findings showed that students' noticing, cued output, and spontaneous use of formulaic sequences differed statistically significantly when given teaching that was vocabulary-focused. This study primarily

focused on noticing and retrieval, two of Nation's (2001) three psychological processes. In this research, the third process — generative use — was applied only occasionally.

El-Dakhs et al. (2017) looked into how pre-writing vocabulary exercises that explicitly teach formulaic sequences affected students' ability to write in foreign languages. The study used a pre-test/post-test design and lasted for 10 weeks. The results demonstrated that students used formulaic sequences more frequently in their writing after receiving specific instruction in them. The findings also hinted at a beneficial effect of explicit formulaic sequence training on learners' lexical preferences and overall writing quality. To learn about ESL undergraduate students' attitudes toward the use of teaching lexical bundles in the improvement of writing abilities in a second language.

Müjdeci (2014) examined whether the explicit teaching of formulaic sequences had a significant effect on the receptive and productive knowledge of formulaic sequences among EFL learners. The study group contained two groups: One experimental one control group. The experimental group received experimental instruction in which the target formulaic sequences were taught through additional exercises as well as their course books. The quantitative data were collected through self-design receptive and productive knowledge of formulaic sequences tests. The findings revealed that noticing activities about formulaic sequences and practice improve EFL learners' productive and receptive knowledge of formulaic sequences.

Ucar (2017) looked into how the explicit teaching of lexical bundles affects Turkish EFL students' academic writing by observing, retrieving, and generating activities, along with participant feedback. The findings of the study showed that the instruction of lexical bundles through noticing, retrieving, and producing activities had a substantial impact on the learning and memory of both productive and receptive lexical bundles in both restricted and unrestricted environments. The study's descriptive design revealed that this treatment had a significant positive impact on study participants. Kanglong & Afzaal (2020) looked into how teaching lexical bundles affected the students' writing abilities. The findings showed that the participants' writing abilities were significantly impacted by the lexical bundles' instruction session. The study revealed that explicit lexical bundle education had a substantial impact on 34 undergraduate students' writing abilities.

Birhan (2021) examined how lexical bundles impact academic writers of abstract genres who are learning English as a second language. The author also considers students' attitudes toward learning lexical bundles to enhance their academic writing skills. The findings demonstrated that lexical bundles improve students' academic writing skills, particularly when it comes to the writing of the abstract variety. The participants had favorable things to say about the lexical bundle and the suggestions made to help them become better academic writers.

Güzel (2022) investigated whether song-based lessons had a significant impact on teaching formulaic sequences to EFL young adult learners. This research was an explanatory sequential mixed method research design in which the quantitative part was gathered over a period of 8 weeks and the qualitative part was collected through semi-constructed interviews. The participants were instructed through three types of intervention including two experimental groups and one control group. The findings revealed that the explicit instruction with the song was found to be more effective than the other two instructions. However, as for the retention of the formulaic sequences, the song did not significantly influence the participants' retention.

1.2. Purpose of study

There has not been much research done on the effects of explicit lexical bundle training on the acquisition of these multi-word expressions in the academic writing skills of pre-service EFL teachers in the Turkish context. By addressing how lexical bundles could be instructed to non-native language

learners over the long-term to support their academic writing performance, the results of this study may fill a gap in the body of prior research. The purpose of this study is to determine whether teaching lexical bundles has an impact on developing prospective teachers' writing skills in terms of accuracy and appropriacy. In this case, it is anticipated that the study's findings will provide insights into fresh lexical bundle-related approaches to language teaching. The following areas of scientific interest are addressed in this study:

1. What effect does teaching lexical bundles have on improving Turkish prospective EFL teachers' academic writing abilities?
 - a. Does the instruction of lexical bundles make a significant difference in improving Turkish prospective EFL teachers' academic writing abilities in terms of accuracy?
 - b. Does the instruction of lexical bundles make a significant difference in improving Turkish prospective EFL teachers' academic writing abilities in terms of appropriacy?

2. Materials and Methods

This research was a pre-posttest design study conducted at Tokat Gaziosmanpaşa University's English Language Teaching Department of the Education Faculty. A within-group time series design with participants in a single treatment group makes up the design's quantitative portion.

2.1. Participants

Thirty aspiring EFL teachers who were enrolled in Tokat Gaziosmanpaşa University's ELT program participated in the study. They were all 1st-year students taking academic writing classes. A "permission form" was handed to each participant after explaining the treatment's goals and structure to them. The participants' ages varied from 19 to 22. Turkish was the participants' native language.

2.2. Instruments

As a pre-test and post-test assignment, participants were to create an argument paragraph in response to the following specific topic: "The importance of vocabulary in improving EFL students' academic writing skills." This subject was chosen since it was pertinent to the research's main objective. The goal of this extended writing was to determine whether or not participants could use the target lexical bundles in their productive writing.

The 12 most frequently used three-word lexical bundles in academic writing were selected from the Corpus of contemporary American English (COCA). The reason why COCA was chosen for this study is that it is the largest freely-available online corpus of English. The other criterion was that each item was pedagogically related to students' academic writing papers.

2.3. Procedure

The therapy lasted for 4 weeks straight (1-h session each week). As pre-tests for the first session, each participant was required to write a brief argumentative essay (500–750 words) on a predetermined subject. In the second session, the researcher gave the students an overview of the project, defined the term "lexical bundle," and discussed the benefits of teaching lexical bundles to EFL students. It was explained to the trainees that mastering these academic idioms would help them improve their writing skills. The explicit training of the target lexical bundles was implemented in the second, third, fourth, and fifth sessions using corpus-based activities and application activities. Worksheets with a range of tasks, including 12 target lexical bundles, were distributed to the participants (Table 1). The lessons included exercises using important lexical bundles in meaningful sentences, fill-in-the-blank exercises, substitution tasks, and concordance tasks from scholarly texts in Coca. The participants once more had to complete a brief argumentative essay on the same subject as the post-test in the final session.

Table 1. *Target Bundles Used in the Current Study*

“the effect of”	“the use of”	“one of the”
“as a result”	“the fact that”	“the number of”
“The purpose of”	“in other words”	“part of the”
“the rest of”	“concerning”	“as well as”

2.4. Data Analysis

A paired-sample t-test was used to compare the writing scores of the participants before and after the lexical bundles’ instruction session to see if there was a statistically significant difference between the two. To gauge students’ useful understanding of lexical bundles in writing, two dependent variables — accuracy and appropriateness — were measured. The two factors under consideration were the accurate usage of target bundles and the intended meaning. Every time a target bundle was used, its suitability and accuracy were assessed. Target bundles were given a score of 1 when used correctly, and a score of 0 when their intended meaning was incorrect. For accuracy, the researcher used Čolović-Marković (2012) scoring matrix. Table 2 displays the score matrix:

Table 2. *The Scale to measure Lexical Bundles in argumentative paragraphs*

3=	“Correct sentence; spelling difficulties are possible but there are no morphological or derivational errors.”
2=	“The phrase is correct, however, there are issues with the inflectional morphology (for example, "in term of" rather than "in terms of").”
1=	“incorrect phrase, yet there is an effort to produce the right term, which can be summed up as one of the following: “a. Changing a preposition (for example, using "in the other hand" instead of "on the other hand")” b. The phrase is missing a function word (for example, "as outcome" rather than "as a result”).” “c. replacing one word in a phrase with a word from the same word categories that are similar in speaking, pronouncing, or meaning (for example, using "the effort of" instead of "the effect of”)”
0=	“No attempts have been made to create lexical bundles or any of the problems listed under the rating of 1 in combination.”

Two raters assessed the paragraph (60 argumentative paragraphs in total). For contentious paragraphs, an Intraclass Coefficient Test was developed to assess the consistency between these two raters (i.e., accuracy and appropriacy). For accuracy, the inter-rater reliability coefficient was found to be .948 for the pretest; .980 for the post-test of accuracy; for appropriateness, it was .908 for the pre-test and .987 for the post-test. The average values between 1.00 and 5.00 for the survey’s arithmetic means are as follows: totally agree: 4.21–5.00; agree: 3.4–4.20; neutral: 2.6–3.40; disagree: 1.8–2.60; and totally disagree: 1.00–1.80.

2.5. Ethics Committee Approval

The authors confirm that ethical approval was obtained for this research (Approval Reference number: 218816). Field studies started after ethical approval had been obtained from the Ethics Committee of Tokat Gaziosmanpaşa University.

3. Results

Shapiro–Wilk test and the skewness and kurtosis coefficients were calculated to see whether the normality assumption was upheld. Tables 3 and 4 contain coefficients and findings.

Table 3. *Skewness and kurtosis values*

		Statistics	Std. Deviation
Skewness	Accuracy	0.226	0.427
	Appropriacy	0.115	0.427
Kurtosis	Accuracy	0.240	0.833
	Appropriacy	0.-435	0.833

Table 4 shows that skewness had values of .226 for accuracy and .115 for appropriateness, whereas Kurtosis had values of .240 for accuracy and .833 for appropriateness. The dispersion is regarded as normal when the kurtosis and skewness values are between -1.5 and +1.5 (Tabachnick and Fidell, 2013). The Shapiro-Wilk test findings are shown in Table 4.

Table 4. *Test of Normality for Accuracy and Appropriacy*

Tests of Normality			
	Statistic	df	Sig.
Accuracy	0.957	30	0.254
Appropriacy	0.961	30	0.327

Table 4's results show that the sig values for appropriateness ($p=0.327$) and accuracy ($p=0.254$) were both >0.05 . The distribution is considered to be normal because the data fit the normal curve. The descriptive data, such as mean scores and standard deviations, were used to compare the outcomes of the treatment group for accuracy on lexical bundles to respond to the first study question. Table 5 presents the findings.

Table 5. *Pre-test and Post-test Accuracy Mean Scores of the Treatment Group on Lexical Bundles*

Descriptive Statistics						
Accuracy	N	Range	Minimum	Maximum	Mean	Std. Deviation
pretest	30	9.00	0.00	9.00	2.16	2.86

posttest	30	30.0	3.00	33.00	15.36	6.87
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Table 5 demonstrates that the intervention group's average post-test results (M=15.36, SD=6.87) were greater than the individuals' pre-test results (M=2.16, SD=2.87) in respect of how effectively individuals used lexical bundles in their essay papers.

A more thorough analysis utilizing paired samples t-test was performed on the pre-test and post-test findings of the treatment group to ascertain the impact of the explicit instruction of lexical bundles on the attainment of the target bundles in terms of accuracy. Table 6 displays the results of the paired samples t-test for treatment accuracy.

Table 6. Paired Samples t-test results for Accuracy on treatment

Accuracy Results	N	\bar{X}	S	t	p-value
Pre-test	30	2.16	2.86	9.548	0.000
Post-test	30	15.36	6.87		

The results showed that there was a statistically significant difference ($t(29) = 9.548, p < 0.05$) between the two tests in terms of the correct employment of the bundles in their argumentative paragraphs, as shown in Table 6. Conclusion: Turkish prospective EFL instructors' writing skills are greatly improved in terms of accuracy when given lexical bundle instruction.

Descriptive statistics such as mean scores and standard deviations were used to compare the outcomes of the therapy group in terms of appropriacy. The outcomes are displayed in Table 7.

Table 7. Pre-test and Post-test Appropriacy Mean Scores of Treatment Group on Lexical Bundles

Descriptive Statistics						
Appropriacy	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre-test	30	3.00	.00	3.00	0.70	0.95
Post-test	30	9.00	1.00	10.00	4.43	2.29

Regarding the students' appropriate use of lexical bundles in their essay papers, Table 7 shows that the participants' pre-test (M=.70, SD=.95) results were lower than the average scores of the post-test (M=4.43, SD=2.29) of the experimental group.

A more extensive analysis utilizing paired samples t-test was performed on the pretest and post-test findings of the intervention group to ascertain the effect of the explicit instruction of lexical bundles on the attainment of the target bundles in terms of appropriacy. Table 8 shows whether the results of the paired samples t-test for the experimental group were statistically significant or not.

Table 8. Paired Samples t-test results for Appropriacy

Appropriacy Results	N	\bar{X}	S	t	p-value

Pre-test	30	0.70	0.95	-7.992	0.000
Post-test	30	4.43	2.29		

The results showed that, in terms of the proper application of the bundles in their argumentation paragraphs, there was a statistically significant difference ($t(29)=-7.992$, $p<0.05$) between the two tests, as shown in Table 8. It can be concluded that Turkish prospective EFL instructors' writing skills are greatly improved in terms of appropriateness through the instruction of lexical bundles.

4. Discussion

This study was intended to investigate the impact of teaching lexical bundle bundles on enhancing the academic writing skills of prospective EFL teachers. The research design was a within-group time series design including one experimental group. The quantitative data were gathered through pre-test and post-test scores of argumentative paragraphs to measure instructional effects in terms of accuracy and appropriacy. The results of the study revealed that the instruction of lexical bundles significantly develops Turkish prospective EFL teachers' writing skills in terms of accuracy and appropriacy. The findings of the present study were aligned with the literature (Kazemi et al., 2014; AlHassan & Wood, 2015; Latifi & Afraz, 2015; El-Dakhs et al., 2017; Nemati, 2019; Kanglong & Afzaal, 2020; Yilmaz & Koc, 2020; Birhan, 2021) that concluded that explicit instruction of lexical bundles significantly affected the writing abilities of learners.

El-Dakhs et al., (2017) investigated the effect of the explicit instruction of formulaic sequences in pre-writing vocabulary activities on foreign language writing. The study lasted for a 10-week study of a pre-test/post-test design. The findings showed that the explicit instruction of formulaic sequences led to increased use of the sequences in students' writing. The results also partially supported a positive influence of the explicit instruction of formulaic sequences on the learners' lexical choices and overall writing quality. The finding of the present study aligns with the findings of Alhassan & Wood's (2015) research which examined the importance of explicit instruction of formulaic sequences in augmenting second language learners' academic writing abilities. The results revealed that explicit instruction of formulaic sequences has a remarkable effect on second language learners' academic writing abilities.

Kogan et al., (2018) investigated the effect of corpus-based instruction of German compound nouns and lexical bundles for developing academic writing performance. The participants were 14 Russian learners enrolled in a compulsory German class for Specific Purposes. Pre-test, post-test, and delayed post-test were conducted after the intervention that included hands-on/off activities. The findings of the study indicated that short-term teaching lexical bundles had a remarkable impact on students learning German for specific purposes. According to the results, all the participants improved their ability to recall and use these expressions in their academic writing.

The findings of this present study were in line with the results of Park's (2019) study which investigated students' experiences with lexical bundles under a variety of instructions in L2 academic writing courses. The research included a mixed method that contains both quantitative and qualitative sources of data. The results of the quasi-experimental study revealed a statistically significant effect of intentional and semi-intentional interventions on learners' post-test and delayed post-test lexicogrammatical results. Although the first instruction (semi-intentional) was effective concerning the immediate post-test gains, the second instruction (intentional) was also effective in terms of delayed post-test results.

Teachers have some concerns about analyzing all concordance lines to find out the appropriate ones to teach target bundles in contexts. Teachers who are teaching lower-level students could prefer to write their sentences for teaching these lexical items (Çalışkan & Gönen, 2018). In this regard, identifying concordance lines could be challenging both for instructors and lower proficiency levels. Therefore, teachers should be familiar with corpus-based language pedagogy so that they could raise their awareness of corpus implementations and use these applications more in language classrooms. Çalışkan and Gönen's (2018) research showed that teacher training on corpus applications revealed positive effects on both the theoretical and practical use of corpora in their classrooms.

5. Conclusion

The present study has some pedagogical implications. First, it might be crucial for instructors and material developers to include the expressions in their teaching syllabus to promote prospective EFL teachers' successful acquisition of these expressions in academic writing classes in their 1st year or EAP classes. In addition, students who would like to improve their academic writing abilities should focus on lexical bundles as one method of developing their skills. Teachers also should consider that male students struggle with producing academic papers more than female students.

There were some limitations in the present study. One restriction was that there was no control group to compare the results of the present study. Although remarkable gains were obtained through pre-and-post-test scores, one or two control groups could be integrated in further research to be able to measure significant effects between control and experimental groups. Another limitation was the restricted quantity of participants and the insufficient length of the intervention implemented by the researchers.

For further research, the length of the sessions could be increased along with more participants with different levels. Moreover, the corpus-based activities such as concordances from COCA or sentence writing might have been complicated for some learners to perceive the target lexical bundles, so, longer intervention sessions might be involved with more practice in further studies.

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