



## The Utility of Lexical Bundle Teaching for Improving ESP Learners' Writing Ability on IELTS

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### Abstract

**Objective:** The effectiveness of Lexical Bundle (LBs) instruction for facilitating writing skill development has been a controversial issue in language teaching. This study examined the impact of LBs instruction on English for Specific Purposes (ESP) learners' performance on IELTS writing task 2.

**Methods:** To this end, first, 60 male and female ESP learners were randomly selected from among 150 ESP learners of Tabriz University of Medical Sciences as participants. Second, these participants were assigned to the experimental group and the control group, each with 30 learners. Both groups were then administered IELTS writing task 2 as a pretest. The experimental group was provided with ten sessions of IELTS-Task 2-related LB instruction. The control group, however, did not receive this kind of instruction. Finally, the researchers administered IELTS writing task 2 to both of the groups anew as a posttest.

**Results:** The results suggest that teaching the relevant bundles had significant positive impacts on ESP learners' general performance of the relevant writing tasks, task achievement grammatical range and accuracy, vocabulary knowledge, as well as observing cohesive ties and coherence in their writing.

**Conclusions:** The results may provide some useful insights regarding the instruction of LBs in IELTS preparation courses for the ESP learners.

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## Introduction

The writing skill constitutes a language skill that assumes a pivotal role in various situational contexts (Lillis, 2001). It has become an academic prerequisite for academicians, researchers, teachers, and professors who are predominantly concerned with the widespread dissemination of information on the recent findings of research (Lim & Luo, 2020; Mur Duenas, 2012; Tardy, 2016; Wang, 2017). In addition, writing is the main aspect of the various fields of knowledge including medicine and facilitates scientific communication between the practitioners of these fields such as physicians (Mur Duenas, 2012). As Wang (2017) pointed out, the above-mentioned functions of writing in daily life accentuate its significant role in academic literacy.

The development of a satisfactory writing ability depends on diverse factors including the acquisition of phrasal vocabulary including the *Lexical Bundles* (LBs) (Lan & Sun, 2019; Shin, 2018). Biber et al. (2004) defined LBs as the sequences of a specific number of words that are more frequently used with each other in comparison with the other word sequences across different linguistic contexts. According to Biber and Barbieri (2007), LBs play an important role in the learners' writing performance on international exams such as IELTS. According to Van Waes and Leijten (2015), the writing tasks of IELTS are classified into two underlying categories including *controlled writing* tasks and *free writing tasks*. As they explained, these writing tasks determine language learners' ability to perform the diverse academic tasks of their pertinent field of knowledge in their academic settings.

The scrutiny of the objective of the IELTS writing tasks highlights the fact that they are utilized to specify the learners' ability (e.g. ESP students' ability) to perform their academic activities and tasks. Hyland (2006) pointed out that ESP courses encompass language courses that are predominantly developed for the university learners or the individuals in certain occupations and intend to provide them with the instruction of English language skills and aspects that facilitates their task performance in the relevant academic and vocational settings. Hyland (2016) noted that, among the various sub-branches of ESP, English for Medical Purposes (EMP) has attracted considerable attention due mainly to the fact that it has a great impact on the dissemination of the knowledge of medicine among the academics across the world. According to him, EMP refers to instruction of English skills to physicians, nurses, pharmacists and other individuals who work in other medical professions.

A close examination of the related empirical studies indicates that Second Language Acquisition (SLA) researchers have focused on specific aspects LBs to the exclusion of the others. More specifically, some of the studies (e.g. Boroujeni, et al., 2015; MacArthur, et al. 2008) have examined the degree to which the instruction of diverse grammatical structures improves native and non-native English speakers' writing performance. Furthermore, other studies (e.g. Askarzadeh et al., 2010; Keyvanfar & Vafaeikhoshkhou, 2015) have focused on the language learners' attitudes towards the writing tasks of the proficiency tests including TOEFL. Moreover, certain studies (e.g. Rezai, 2022) have examined the effects of peer feedback on the language learners' performance on IELTS writing tasks. In addition, a few studies (e.g. Esfandiari et al., 2021) have tried to specify the functions of LBs in EFL texts. Additionally, very few studies (e.g. Cooper, 2013) have compared the ESL learners' uses of the LBs on IELTS Task 2 and their university writing tasks. In addition, a number of studies

(e.g. Estaji & Hashemi, 2022; Saadatarra et al. 2023) have focused on the learner corpora to specify IELTS candidates' use of LBs on IELTS writing tasks. Besides, certain studies (e.g. Pearson, 2021) have used a correlational design to determine the relationship between language learners' LB uses on IELTS writing tasks and general writing tasks. Lastly, some studies (e.g. Shamsabadi et al. 2017) have examined the utility of explicit LB instruction for improving language learners' academic writing performance.

Nonetheless, the relevant studies have disregarded the scrutiny of the utility of the LBs for improving the ESP learners' performance on the diverse aspects of IELTS writing tasks. More specifically, the study tried to determine the degree to which the instruction of academic LBs, which are not adequately taught in most of the ESP courses, can expedite the ESP learners' development of an adequate writing ability which improves their IELTS writing task 2 performance. To this end, this study endeavored to address this gap in Iran. More specifically, it strived to answer the following questions:

- 1) Does teaching LBs to Iranian ESP learners have any significant effect on their IELTS Writing Task 2 performance in general?
- 2) Does teaching LBs to Iranian ESP learners have any significant effect on their grammatical range and accuracy on IELTS Writing Task 2 performance?
- 3) Does teaching LBs to Iranian ESP learners have any significant effect on their lexical resource (vocabulary) on IELTS Writing Task 2 performance?
- 4) Does teaching LBs to Iranian ESP learners have any significant effect on their task response on IELTS Writing Task 2 performance?
- 5) Does teaching LBs to Iranian IELTS candidates have any significant effect on their cohesion and coherence on IELTS Writing Task 2 performance?

## **Literature Review**

### **LB Instruction in ESP Writing Courses**

Cargill and O'Connor (2006) stated that the process approach endeavors to make the writing tasks meaningful by giving priority to the content of the tasks over their formal aspects. Second, it provides the learners with the opportunity to formulate plans for their writing tasks and to implement them according to diverse writing task requirements. Third, it appraises the learners of the various steps in writing including the drafting, sharing, evaluating, revising, and editing stages and made them aware of the fact that they could redress their written output in successive rounds of drafting and revision. Fourth, it empowers the language learners to take advantage of their peers' feedback in order to ameliorate the various aspects of their written output in the process of composition. Finally, this approach enables the learners to have individual conferences with their teacher and to take advantage of their formative feedback in order to express their ideas in an effective way and to deal with the form-based issues of their writing tasks. As Cargill and O'Connor (2006) concluded, the characterization of writing as a process indicates that most of the language learners are likely to face multitudinous challenges in the

process of writing skill development to perform writing tasks on various tests including the proficiency tests.

As Nguyen (2015) pointed out, a large number of the second language learners may face various challenges in the performance of the writing tasks in different proficiency tests. As he explained, most of these difficulties stem from the mother-tongue-based interference of the linguistic patterns and writing conventions. According to him, learners' knowledge of the cultural issues of their first language and the organizational patterns of first language writing tasks predispose them to errors during the performance of the writing tasks of the proficiency tests. That is, the learners' task performance is adversely affected by the negative transfer of the rhetorical conventions of their mother tongue in second language classrooms. Moreover, the language learners' lack of second language knowledge may cause these problems. Eskalieva and Jaksulikova (2021) pointed out that, this issue prevents the learners from expressing their ideas and organizing their brainstormed ideas in an effective way. According to them, learners' inadequate knowledge of the diverse grammatical structures and vocabulary items of the target language acts as a barrier to their effective writing task performance. Finally, second language learners' difficulties in performing the writing tasks of the different proficiency tests may partially stem from their lack of *world knowledge*. According to Yuliani et al. (2019), language learners may lack the required *schemata* or the *knowledge structures* of the various situational contexts and may not be able to brainstorm their ideas regarding the relevant writing tasks in an effective way in the process of writing task performance of the proficiency tests. As they concluded, the writing tasks of IELTS have proved to be among the most challenging writing tasks for most of the second language learners across the world.

Van Waes and Leijten (2015) pointed out that IELTS writing tasks differ in the IELTS Academic and IELTS General Training tests. As they explained, the writing tasks of IELTS Academic focus on the language learners' ability to perform writing tasks in educational settings including the language classrooms. On the other hand, the writing tasks of IELTS General Training focus on the learners' ability to perform real world writing tasks which are considered to be the essential requirements of migration.

Notwithstanding, according to Van Waes and Leijten (2015) the writing tasks in both of the above-mentioned versions of IELTS can be classified into two underlying categories including the controlled writing tasks and free writing tasks. In both versions of these tests, Writing Task 1 prompts the language learners to perform certain writing tasks in response to the provided pieces of material. For instance, in IELTS Academic Task 1, the language learners are prompted to expound on the various aspects of a chart concisely. Likewise, in IELTS General Training Task 1, the language learners are asked to write different kinds of letters including letters of request to apprise the native speakers of the target language of their difficulties and to make requests of them based on the task requirements.

As Segalowitz (2010) pointed out, the scrutiny of the requirements of these tasks highlights the fact that the language learners' lack of the knowledge of language forms and their lack of world knowledge may exacerbate their performance of the controlled IELTS writing tasks (i.e. Task 1). He explained that, the language learners' lack of knowledge regarding the grammatical structures and vocabulary items may not allow them to express their intended meanings in a satisfactory way. Furthermore, as he noted, the learners' lack of the required *schemata* may



prevent them from performing the real-world writing tasks such writing letters of request satisfactorily.

On the other hand, Van Waes and Leijten (2015) stated that, in both of the versions of IELTS, Task 2 constitutes a free writing task that prompts the learners to brainstorm ideas regarding a certain topic of interest, to organize their ideas logically, to take advantage of the second language in order to express their ideas coherently, and to produce the intended outcome of the relevant writing tasks. For instance, in a typical IELTS Academic Writing Task 2, the language learners are prompted to expound on their perspective on a certain issue and to write a persuasive paragraph to support their point of view in an acceptable way. Likewise, in a regular IELTS General Training Task 2, the language learners are asked to write an essay about one of their preferred topics in order to persuade the readers into supporting their ideas. As Van Waes and Leijten (2015) noted, IELTS academic writing task 2 is assessed based on four major criteria including: *task response, coherence and cohesion, lexical resource (vocabulary), and grammatical range and accuracy*. They explained that, task response determines the degree to which the learners' writing task performance is compatible with the aims of the relevant task. Moreover, cohesion refers to the logical connection between the sentences and coherence specifies the connections between the ideas at the larger discourse levels. Furthermore, lexical resources focus on the use of a variety of academic vocabulary items in an appropriate way. Lastly, grammatical accuracy comprises the use of correct grammatical structures and grammatical range determines the use of diverse types of structures in the writing task.

Segalowitz (2010) noted that, the examination of the characteristics of Task 2 in both of the versions of IELTS accentuates the fact that the learners may experience difficulties in performing these tasks due mainly to their inadequate understanding of the second language culture, limited knowledge of the rhetorical conventions of the second language, lack of ability to use the cohesive devices of the target language in an effective way, and inadequate phrasal vocabulary knowledge including knowledge about LBs among others. In addition to these issues, IELTS writing task 2 may be a troublesome task for the candidates who are learning English for specific purposes (Van Waes & Leijten, 2015). Grabowski (2015) pointed out that these learners are generally familiar with the vocabulary items in their relevant fields and are not able to use the academic LBs appropriately in their writing tasks. Consequently, they have to be provided with detailed instruction on the use of academic LBs to perform their academic writing tasks in an effective way (Segalowitz, 2010). Grabowski (2015) explained that the instruction of phrasal vocabulary including LBs prompts the learners to learn them as complete unanalyzed units and to retrieve them as separate items in writing tasks performance. According to him, this issue decreases the learners' processing load. Moreover, it reduces their grammatical errors since it does not force them to process the grammatical knowledge in task performance and helps them to take advantage of internalized patterns to perform the tasks.

Biber et al. (2004) defined LBs as the sequences of a specific number of words which are more frequently used with each other in comparison with the other word sequences across different linguistic contexts. The scrutiny of the above-mentioned definition indicates that it characterizes LBs in terms of frequency. Considering this definition, a number of researchers (e.g. Ellis, 2012; Ellis & Simpson-Vlach, 2009) have determined threshold levels of frequency, which range from 10 times per million words to 40 times per million words, for determining the prevalent lexical bundles in various types of corpora.

Nonetheless, the frequency criterion has been criticized since the above-mentioned threshold levels have been determined subjectively (Grabowski, 2015). Consequently, several researchers (e.g. Gries & Ellis, 2015) have applied the criterion of dispersion for specifying the lexical items. As Grabowski (2015) pointed out, this criterion refers to the number of texts which encompass the relevant lexical bundles. As he concluded, these definitions of LBs show that the researchers have examined their underlying functions across various texts.

Biber et al. (2004) focused on LB functions and classified the lexical items into three main categories including the referential, discourse-organizer, and stance categories based on their textual functions. They explained that, the referential LBs are predominantly utilized in order to specify the particular characteristics of a specific entity. Moreover, according to them, the discourse-organizer bundles highlight the existence of the connections between diverse pieces of the discourse across different linguistic contexts. Finally, as they concluded, the stance bundles are used in order to expound on the language users' emotions, attitudes, and perspectives on various aspects of their social life. As Biber et al. (2004) concluded, the above-mentioned LB functions highlight their consequential role in the development of the writing skill in different language courses including the ESP courses.

The close perusal of the related literature (e.g. Collins & Holliday, 2022; Coxhead & Dang, 2019) accentuates the fact that ESP has become one of the most frequently investigated sub-fields of SLA. Basturkmen (2021) noted that ESP encompasses the instructional approach to English instruction which began in the 1960s due mainly to the attention to the global markets and the role of English in the facilitation of commercial activities in the relevant markets. Hyland and Shaw (2016) noted that the introduction of the ESP courses to the field of SLA made the researchers aware of the fact that they needed to specify the language-use purposes of the various fields of knowledge, to determine the ESP learners' language learning objectives, and to develop the materials which satisfied their pertinent needs. Considering these issues, Hyland and Jiang (2021) defined ESP as a type of English instruction which aims to empower learners in different majors to perform their academic, researcher-oriented, and occupational tasks in their relevant settings.

Hyland (2012) pointed out that the main principle of the ESP is the recognition and determination of learner needs. He stated that, the modern era of international communication has made the individuals in diverse fields of knowledge cognizant of the incompatibility between their general English knowledge and the specific English knowledge requirements in their pertinent fields of knowledge. This recognition has prompted the SLA researchers to examine these learners' needs and to develop appropriate ESP courses which address their increasing needs including the writing-based needs in their fields.

Hyland (2016) pointed out that, among the sub-branches of ESP, EMP has been a recurrent line of research. He explained that, the interest in the medicine students' English learning needs stems from the consequential role of this field of knowledge in the improvement of human life and the role of English as the academic lingua franca across the world. According to him, the medicine learners' English learning needs prompts them to prepare themselves to take international language proficiency tests including IELTS. As he concluded, there is a need for more research on the instructional approaches that may have an advantageous effect on the ESP medicine learners' ability to perform the tasks of these tests including their writing tasks.

The scrutiny of the empirical studies of LB in general English and ESP courses highlights the fact that the researchers have not adequately examined their utility for improving the candidates' IELTS writing task 2 achievement. For instance, Saadatara et al. (2023) made an effort to determine the different types of LBs that were used by the ESP learners on IELTS writing task 1 and tasks 2. Moreover, Cooper (2013) conducted a predictive correlational study to examine the relationship between IELTS candidates' LB use on IELTS writing tasks 2 and their use of academic LBs on their university writing course tasks. Likewise, Pearson (2021) investigated the relationship between IELTS candidates' LB uses on IELTS writing task 1 and task 2 and their writing performance on university writing tasks. Furthermore, Estaji and Hashemi (2022) made an effort to examine the IELTS candidates' use of LBs by examining a large corpus of learners' IELTS task 2 performances. In addition, Shamsabadi et al. (2017) tried to specify the utility of explicit LB instruction for improving the learners' performance on university writing tasks. Additionally, Ghafar Samar et al. (2018) carried out a study to examine the extent to which explicit instruction of LBs to ESP learners improved their academic writing ability. However, these studies have not investigated the degree to which LB instruction is likely to improve ESP learners' IELTS writing task 2 performance. Therefore, there is a need for further studies in this regard.

## **Method**

### **Participants**

The participants were 60 male and female ESP learners of medicine (i.e. 25 male & 35 female) who participated in the mock exam at Pardis Institute in Tabriz (Iran). These participants were randomly selected out of a pool of 150 ESP learners of medicine at Tabriz University of Medical Sciences in line with Krejcie and Morgan's (1970) criterion. They ranged in age from 19 to 24, were native speakers of Azeri, Persian, or Kurdish and intended to take the IELTS academic module. The ESP learners with overall scores of 4 and 5 out of 9 for Task 2 of writing were considered intermediate-level learners and constituted the participants of the study. They were divided into two groups including the *experimental group* and the *control group*. The experimental group received instructions in line with LBs in addition to the scheduled IELTS preparation course in writing. This group was called the Lexical Bundle Group (LBG). Nonetheless, the Control Group (CG) received only the schedule of IELTS writing course. The researcher obtained written informed consent from all of the participants prior to onset of the study.

### **Materials and Instruments**

#### **IELTS as a General Proficiency Measure**

A standardized IELTS test that involved 38 listening items, 35 reading items, and 2 writing tasks was used to determine the general proficiency of ESP learners. The test was administered to these learners to select the participants. Based on the test manual and leaflet, the KR-21 reliability indices of the listening and reading sections of the test were 0.92 and 0.94 respectively. Likewise, the KR-21 reliability indices of the speaking and writing sections of the test were 0.89 and 0.87 respectively.

### **IELTS Writing Task as a Pretest**

In the present study, the researchers used task 2 writing of academic module of the standard IELTS in order to collect the data on the participants' writing ability before the onset of treatment sessions. The writing task asked the participants to write an argumentative essay. The topic of the writing task was "Modern technology now allows rapid and uncontrolled access to information in many countries. This is a danger to our societies. To what extent do you agree or disagree?". The participants performed this task in a 40-minute period of time.

### **IELTS Writing Task as a Posttest**

Based on the objectives of the study, the researchers took advantage of the same task 2 writing of academic module of the standard IELTS for examining the participants' writing ability subsequent to the termination of the treatment sessions. Similar to the writing pretest, the participants completed this task in 40 minutes.

### **Scoring Rubric of IELTS Task 2**

The research questions were answered on the basis of the data that were collected on the participants' performances on IELTS writing pretest and posttest. These scores were the results of the inter-rater method of scoring and constituted the quantitative, product-oriented data that were analyzed. The scoring rubric was the rubric that was issued by the IELTS center of the British Council. The IELTS examiners assess an IELTS essay using the 4 criteria of task response, coherence and cohesion, lexical resource (vocabulary), and grammatical range and accuracy. Each criterion accounts for 25% of the total marks. Candidates are given a band score for each criterion and a total score for task 2. Likewise, in the present study, the researchers focused on these criteria for answering the relevant research questions.

### **Raters**

The researchers asked two raters to score the participants' writing performances. These raters were IELTS mock examiners and were completely familiar with the process of task2 scoring. They used the manual of European Council for scoring the participants' performances. Based on the results, the inter-rater reliability index (.87) was satisfactory.

### **Ethics Approval and Voluntary Participation**

In this study, the researchers took the necessary measures to deal with the ethical considerations in an appropriate way. More specifically, before the onset of the study, they informed the participants about the objectives of the study, made them aware of the fact that participation in the study was completely voluntary, and ensured them of their anonymity in the study. Moreover, they apprised them of the fact that they would take all of the measures to guarantee the confidentiality of the participants' data. Lastly, the researchers obtained written informed consent from all of the participants before the beginning of the data collection.

### **Procedure**

Based on the objectives, first, the researchers selected 60 male and female ESP learners of medicine from among 150 ESP learners who took part in the mock academic IELTS at Pardis Institute in Tabriz (Iran) as the participants. Second, they obtained written informed consent



from all of the participants prior to the onset of the study. Third, they randomly assigned the participants to the LBG and the CG. Fourth, they administered the writing pretest of the study to both of these groups. The participants took this test in 40 minutes. Fifth, during the treatment sessions, LBG was provided with LB instruction for ten 90-minute session in a five-week period of time (i.e. 2 sessions per week). More specifically, this group received the instructions for IELTS task 2 writing in an academic module and was provided with explicit teaching of LBs in line with Hyland and Jiang’s (2018) perspective on phrasal bundles including the noun-phrase-based, preposition-phrase-based, and verb-phrase-based bundles along with the clausal bundles. Nonetheless, the researchers took advantage of traditional language teaching to provide the participants of the CG with IELTS writing task 2 instruction and did not use the LB instruction in this group. That is, in this group, they provided the learners with information on the structure of paragraphs and essays. Moreover, they apprised the learners of the characteristics of different academic essay types and asked them to write model essays in the context of the classroom. Sixth, they administered the writing posttest to both of the groups subsequent to the termination of the treatment sessions for examining the effectiveness of the treatment of the study. Lastly, they used SPSS 24 to analyze the collected data.

**Data Analysis**

In this study, the researchers intended to examine the impact of one independent variable (i.e. LB instruction) on four dependent variables including task response, coherence and cohesion, lexical resource (vocabulary), and grammatical range and accuracy of the ESP learners’ performance on IELTS writing task 2. Considering this objective, they used MANOVA to perform the data analysis of the study. Moreover, they intended to determine the difference between the performances of LBG and CG on the posttest. As a result, they used an independent-samples t-test to analyze the obtained data.

**Results**

This section answers the raised questions of the study by providing the results:

1) Does teaching LBs to Iranian ESP learners have any significant effect on their IELTS Writing Task 2 performance in general?

An independent-samples t-test was used to compare the means of LBG and CG on the posttest. Table 1 displays these results:

**Table 1.** *Descriptive Statistics; Posttest of Task2 Writing by Groups*

		Group	N	M	SD	SEM
Posttest of Task2 Writing		LBG	30	4.66	.583	.107
		CG	30	3.03	1.181	.216

According to this table, LBG (M= 4.66, SD= .583) had a higher mean compared to CG (M= 3.03, SD = 1.18). Table 2 provides the results of t-test:

**Table 2.** Independent-Samples *t*-test; Posttest of Writing by Groups

	Levene's Test					t-test			
	F	Sig.	T	Df	Sig.	MD	SED	95% CI	
								Lower	Upper
Equal variances	14.602	.000	6.751	58	.000	1.623	.240	1.142	2.105
Non-Equal variances			6.751	42.368	.000	1.623	.240	1.138	2.108

As shown in Table 2, LBG significantly outperformed CG ( $M = 4.66$ ,  $SD = .583$ ),  $t(30) = 6.751$ , Cohen's  $d=0.5$ ,  $p = .000$ ).

2) Does teaching LBs to Iranian ESP learners have any significant effect on their grammatical range and accuracy in Task2 writing performance?

3) Does teaching LBs to Iranian ESP learners have any significant effect on their lexical resource (vocabulary) in Task2 writing performance?

4) Does teaching LBs to Iranian ESP learners have any significant effect on their task response in Task2 writing performance?

5) Does teaching LBs to Iranian ESP learners have any significant effect on their cohesion and coherence in Task2 writing performance?

A MANOVA was used for comparing the LBG and CGs' means on posttests of writing components encompassing 1) grammatical range and accuracy, 2) lexical resources, 3) task response, and 4) cohesion and coherence to probe the second to fifth questions. Table 3 provides the results of the Levene's test:

**Table 3.** Levene's Test of Equality of Error Variances; Posttests of Components of Writing

	Levene Statistic	df1	df2	Sig.
Post Grammatical	10.075	1	58	.002
Post Lexical	10.300	1	58	.002
Post Task Response	13.339	1	58	.001
Post Cohesion and Coherence	16.368	1	58	.000

The results showed that the variances were homogeneous. If groups have equal sample sizes, the violation of this assumption cannot influence the results. Table 4 provides the results of the Box's test of homogeneity of covariance matrices:

**Table 4.** Box's Test of Equality of Covariance Matrices; Posttests of Components of Writing

Box's M	32.235
F	1.949
df1	15
df2	13544.526
Sig.	.015

Box's test results ( $M = 32.23$ ,  $p > .001$ ) highlighted the fact that the covariance matrices were homogeneous. The results of MANOVA are provided in Table 5:

**Table 5. Multivariate Tests; Posttests of Components of Writing by Groups**

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.957	242.077	5	54	.000	.957
	Wilks' Lambda	.043	242.077	5	54	.000	.957
	Hotelling's Trace	22.415	242.077	5	54	.000	.957
	Roy's Largest Root	22.415	242.077	5	54	.000	.957
Group	Pillai's Trace	.640	19.167	5	54	.000	.640
	Wilks' Lambda	.360	19.167	5	54	.000	.640
	Hotelling's Trace	1.775	19.167	5	54	.000	.640
	Roy's Largest Root	1.775	19.167	5	54	.000	.640

The results ( $F(5, 54) = 19.16, p < .05, \text{partial } \eta^2 = .640$  representing a large effect size) showed that there were significant differences between the LBG and CGs' means on posttests of components of writing. Table 6 provides the descriptive statistics for the LB and control groups on posttest of components of the Task2 writing test:

**Table 6. Descriptive Statistics; Posttests of Components of Writing by Groups**

Dependent Variable	Group	M	SE	95% CI	
				LB	UB
Post Grammatical	LBG	4.550	.175	4.199	4.901
	CG	3.517	.175	3.166	3.867
Post Lexical	LBG	4.867	.190	4.486	5.248
	CG	3.583	.190	3.202	3.964
Post Task Response	LBG	4.700	.182	4.335	5.065
	CG	2.533	.182	2.169	2.898
Post cohesion and coherence	LBG	4.583	.161	4.262	4.905
	CG	3.117	.161	2.795	3.438

Based on the results, LBG had higher means compared to CG on posttests of all the components of writing. Table 7 shows the results of mean comparisons:

**Table 7. Tests of Between-Subjects Effects; Posttests of Components of Writing by Groups**

Source	Dependent Variable	Type III Sum of Squares	df	MS	F	Sig.	Partial Eta Squared
Group	Post Grammatical	16.017	1	16.017	17.391	.000	.231
	Post Lexical	24.704	1	24.704	22.741	.000	.282
	Post Task Response	70.417	1	70.417	70.701	.000	.549
	Post Cohesion and Coherence	32.267	1	32.267	41.696	.000	.418
Error	Post Grammatical	53.417	58	.921			
	Post Lexical	63.008	58	1.086			
	Post Task Response	57.767	58	.996			
	Post Cohesion and Coherence	44.883	58	.774			
Total	Post Grammatical	1045.500	60				
	Post Lexical	1158.750	60				
	Post Task Response	913.000	60				
	Post Cohesion and Coherence	966.500	60				

The results indicated that;

A: The LBG (M = 4.55) significantly outperformed CG (M = 3.51) on posttest of grammatical range and accuracy ( $F(1, 58) = 17.39, p < .05, \text{partial } \eta^2 = .231$ ).

B: The LBG (M = 4.86) significantly outperformed the CG (M = 3.58) on posttest of lexical resources ( $F(1, 58) = 22.74, p < .05, \text{partial } \eta^2 = .282$ ).

C: The LBG (M = 4.70) significantly outperformed the CG (M = 2.53) on posttest of task response ( $F(1, 58) = 70.70, p < .05, \text{partial } \eta^2 = .549$ ).

D: The LBG (M = 4.58) significantly outperformed the CG (M = 3.11) on posttest of cohesion and coherence ( $F(1, 58) = 41.69, p < .05, \text{partial } \eta^2 = .418$ ).

## Discussion

Question one made an effort to specify the degree to which teaching LBs to Iranian ESP learners of medicine influenced their general Task 2 writing performance. Based on the results, instruction of relevant LBs significantly improved these learners' general performance on the pertinent writing task. These results support the results of the studies by Kazemi et al. (2014), and Shamsabadi et al. (2017).

Bychkovska and Lee (2017) noted that the instruction of various types of phrasal vocabulary including LBs may have an advantageous impact on the writing ability of the language learners including ESP learners in various academic contexts. They explained that, the LBs empower the learners to organize their *thought patterns* in an efficient way and to express their intentions using various logically arranged sentences, clauses, and paragraphs. Likewise, Chen and Baker (2010) pointed out that, the learning of diverse types of LBs helps the language learners to use the different structural patterns naturally. They explained that, the use of these bundles distinguishes the non-native speakers' stilted writing from the native speakers' authentic writing in various academic writing tasks including the IELTS writing tasks.

Therefore, instruction of the relevant LBs significantly improved ESP learners' general Task 2 performance since it enabled them to arrange their thought patterns and helped them to express their intended meanings with the help of logically arranged pieces of second language discourse. Furthermore, the teaching of the relevant bundles empowered the ESP learners to use the target language in an authentic and native-like way by substituting the LBs for the vocabulary items whose use results in stilted writing performance on the relevant IELTS task.

Question two made an attempt to examine the impact of LB instruction on the ESP learners' grammatical range and accuracy in Task 2 writing performance. Based on the obtained results, the instruction of the above-mentioned bundles had an advantageous impact on these learners' grammatical range and accuracy in the process of IELTS writing task performance. These results are in line with the results of the studies by Ahmadi et al. (2019), and Chen and Baker (2010). The results may be related to the positive effect of LB knowledge on language learners' processing capacity and ability to use diverse grammatical structures.

Hyland (2008) stated that the teaching of the diverse types of LBs may have a beneficial impact on the language learners' grammatical accuracy. He stated that, the different categories



of the phrasal vocabulary including the LBs are acquired and stored in the long-term memory as single units whose processing does not depend on students' knowledge of grammatical patterns. That is, the learners are not likely to commit grammatical errors and make structural mistakes in the process of LB use during the performance of writing tasks. Moreover, Ren (2021) noted that, the learning of the LBs may enable the learners to use various types of grammatical structures which are beyond their current level of competence. He stated that the LBs draw the learners' conscious attention to the various grammatical structures which can be used to express certain meanings and prompt them to take advantage of them to perform their writing tasks.

Based on these issues, it can be averred that instruction of the LBs significantly ameliorated the ESP learners' grammatical range and accuracy in ILETS Task2 writing performance since it expedited their processing of the relevant bundles as single vocabulary items whose retrieval was not challenging in the process of task performance. Moreover, it made the learners cognizant of the range of the grammatical items which could be used to express their intended meanings and encouraged them to utilize them in the process of writing task performance.

Question three made an endeavor to examine the impact of LB instruction on the ESP learners' lexical resource (i.e. vocabulary items) in Task2 writing performance. On the basis of the obtained results, the instruction of the LBs had an advantageous effect on these learners' acquisition of the relevant vocabulary items. These results corroborate the results of the studies by Mirzaei et al. (2020) and Dastpak et al. (2021).

Staples and Reppen (2016) pointed out that the instruction of the phrasal vocabulary is likely to ameliorate the language learners' acquisition of single vocabulary items along with the phrasal lexical units. They explained that, the phrasal vocabulary items draw the learners' attention to the single words which are combined to form the phrasal units including the various types of collocations and lexical bundles and prompt them to look for their meanings and to acquire them apart from the phrasal units themselves. Likewise, Chen and Baker (2010) pointed out that the acquisition of the LBs makes the learners cognizant of the utility of vocabulary items in the process of writing and encourages them to make an effort to learn diverse types of vocabulary.

Considering the above-mentioned issues, it can be averred that, the instruction of LBs significantly ameliorated ESP students' Task2 writing performance since it motivated them to focus on their constituent units and to learn their meanings. Moreover, it made the learners aware of the consequential role of the vocabulary items in the process of writing and prompted them to make an endeavor to acquire the meanings of the pertinent vocabulary items to ameliorate their writing task performance.

Question four examined the impact of LB instruction on the ESP learners' task response in Task2 writing performance. The obtained results showed that the teaching of these bundles significantly improved these learners' task response in the relevant writing task. These results are in line with the results of the studies by Staples and Reppen (2016) and Yin and Li (2021).

Yin and Li (2021) noted that the instruction of the various types of LBs is likely to have a beneficial impact on the language learners' task response in writing tasks. As they explained,

the acquisition of LBs makes students cognizant of their functions and motivates them to use them to arrange and to express the main ideas and their supporting details in their writing tasks. Likewise, Ren (2021) stated that the LBs direct the language learners' attention to the organization of the thought patterns in the second language discourse and encourage them to use them in a native-like way.

Consequently, teaching LBs significantly improved the ESP learners' task response in Task2 writing performance due largely to the fact that it provided them with information on the functions of the bundles and helped them to express the main ideas of the task along with their supporting details in an effective way. Furthermore, it empowered the learners to organize their thought patterns and to express their intentions in writing tasks.

Lastly, question five strived to determine the impact of LB instruction on ESP learners' cohesion and coherence in Task2 writing performance. The obtained results corroborate the results of the studies by Mirzaei et al. (2020), and Dastpak et al. (2021).

Bychkovska and Lee (2017) argued that the instruction of the LBs may improve the cohesion and coherence of the language learners' writing tasks. They noted that LBs ameliorate the learners' understanding of inter-relationships among various pieces of the second language discourse and enable them to express their intended meanings in a more cohesive and coherent way. Similarly, Staples and Reppen (2016) pointed out that, the acquisition of the LBs helps the learners logically related the pieces of discourse to each other and to ameliorate the cohesion and coherence of their writing's tasks.

Therefore, LB instruction significantly ameliorated the ESP learners' cohesion and coherence in Task2 writing performance since it provided them with adequate information on the relationships between the different pieces of second language discourse and assisted them to perform the relevant tasks in a more cohesive and coherent way. Moreover, it empowered the learners to logically relate the various pieces of their writing task discourse to each other and to express their intended meanings effectively.

## **Conclusion**

This study strived to determine the effect of the instruction of the LBs on Iranian ESP students' components of writing in IELTS Task 2 writing performance. Based on the obtained results, teaching the relevant bundles had a beneficial impact on these learners' general performance of the relevant writing tasks. Moreover, on the basis of the results, the instruction of the LBs significantly improved the ESP learners' grammatical range and accuracy in the pertinent task. The results also indicated that the teaching of the LBs improved the learners' vocabulary knowledge and task response. Lastly, the results showed that learners' acquisition of the relevant LBs empowered them to perform the relevant IELTS tasks more cohesively and coherently.

Certain conclusions can be drawn according to these findings. First, there is a need to make a number of structural adjustments to the current ESP teacher education courses. The teacher education course developers have to revise the content of these courses and should include a certain module in the relevant courses which provides the ESP lecturers with adequate

information on various categories of phrasal vocabulary including LBs and informs them about the important role of the LBs in ESP learners' writing task performance. Furthermore, the courses developers should include a specific module in these courses in which the lecturers can obtain sufficient information on the characteristics of the international language tests including the IELTS and the requirements of their different tasks including the writing tasks.

Second, there is a need to reinstruct the ESP teacher educators to empower them to provide the prospective lecturers with information on the LBs which are likely to have a profound effect on the ESP learners' writing performance on international language tests. The examination of these educators' characteristics shows that most of them are experienced instructors with diverse teaching certificates. Consequently, the ESP teacher educators are mainly concerned with practical issues of teaching and may not be able to raise the ESP lecturers' awareness about the theoretical aspects of language including the beneficial impact of LB instruction on writing task performance. The reinstruction of ESP teacher educators is likely to have a positive effect on their ability to inform the ESP lecturers about the important role of LBs in their learners' writing performance. This issue highlights the necessity of providing the ESP teacher educators with state-of-the-art knowledge on the theoretical discussions of second language acquisition.

Third, it can be argued that ESP syllabus designers should redress the instructional materials of the ESP courses in various academic settings. More specifically, the syllabus designers should include certain sections in the ESP textbooks in which the language learners are provided with the opportunity to study and learn various categories of the LBs along with the single vocabulary items in authentic texts. Finally, it can be argued that the ESP lecturers have to provide their learners with specific types of reading-to-writing tasks to improve their LB learning. In these tasks, the learners should be exposed to the reading texts which are rich in terms of LBS. Moreover, they need to be prompted to perform writing tasks which are similar to IELTS writing task 2 on the basis of the information which they obtain from the relevant reading texts. The performance of these tasks can ameliorate the ESP learners' IELTS writing task 2 performance in a noticeable way.

The previous studies of LBs (e.g. Esfandiari et al. 2021; Pearson, 2021; Shahmoradi et al. 2021) have focused on their functions in EFL texts and their significance in EFL learners' academic writing tasks. This study made an effort to deal with a different aspect of the LBs. To this end, it examined the usefulness of the instruction of LBs for improving Iranian ESP learners' performance on IELTS writing task 2. Nonetheless, there is a need to conduct more studies of LBs to obtain adequate information on their role in language learning. The study was limited since the researchers were not able to administer IELTS to the participants and took advantage of the Mock IELTS Writing Task 2 for collecting the data of the present study. Moreover, the study did not measure the participants' use of LBs outside the instruction sessions. This issue hindered the assessment of the long-term impact of LB instruction on the participants' writing ability. Moreover, LB instruction treatment lasted for only ten sessions and the study did not have a standardized curriculum for the control group. Lastly, the study focused on quantitative data and did not use qualitative data, such as feedback from raters and participants to provide a more comprehensive insight into the effectiveness of the LB

instruction. Considering these issues, it can be stated that the future studies need to deal with the limitations and delimitations of the present study. More specifically, the relevant studies have to involve larger samples and should control the impacts of the participants' personal, educational, and cultural characteristics on their obtained results. Furthermore, they need to examine the utility of the acquisition of the LBs for ameliorating the ESP learners' performance on the other writings tasks of the well-known international language tests. In addition, the relevant studies have to examine the effect of the long-term instruction of the LBs on ESP learners' listening, reading, and speaking tasks on the above-mentioned tests. Additionally, these studies need to use mixed-methods designs to collect both quantitative and qualitative data on the effectiveness of LB instruction for improving the writing skill in language classroom. Finally, the future studies have to be conducted in both foreign and second language learning contexts.

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