



An Investigation of Iranian EFL Learners' Knowledge of English Lexical Collocations across Academic Levels

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The present study attempts to have a deeper understanding of collocation knowledge of Iranian EFL learners and to find out whether there is a significant difference in the knowledge of lexical collocations among Iranian EFL learners at four academic levels. It also attempts to examine factors which might affect their performance on collocations. A total of 115 students majoring in English language at four academic levels participated in this study. They were given an 80-item multiple-choice test of English collocations. Descriptive statistics, one-way ANOVA, and post hoc test were used to analyze the data. The results of ANOVA revealed that there was variability in the collocational knowledge within and between the four academic levels. The results of post hoc test showed that there were statically significant differences in the mean scores of the four academic levels, with the exception of sophomores and juniors. These differences are more clearly seen if the freshmen and the seniors are compared. The thorough examination of data also indicated that factors such as interlingual, intralingual, cultural, and frequency of collocations are of influence on the students' knowledge of collocations. The findings might have immediate implications for EFL learners and teachers as well as material designers.

Keywords: English collocation, knowledge of collocations, academic level, Iranian EFL learners

Introduction

Collocations are defined as “the occurrence of two or more words within a short space of each other in a text” (Sinclair, 1991, p. 170) and along with other kinds of multiword units they characterize a larger phenomenon referred to as formulaic language (Leńko-Szymańska, 2014; Wood, 2015; Wray, 2002). It is commonly acknowledged that such units foster communication and play a key role in successful language use. However, enhancing L2 phrasal or collocational knowledge is a gradual process that poses serious obstacles for language learners.

Previous investigations have revealed severe deficiencies in L2 learners' knowledge of multi-word units compared to their knowledge of single words (e.g., Boers, Lindstromberg, & Eyckmans, 2014; Henriksen, 2013) and that, even when they articulate multi-word units, they are likely to overuse specific kinds that they are familiar with (e.g., Foster, 2001; Granger, 1998) and their usage is sometimes inaccurate (e.g., Nesselhauf, 2005; Yi, Lu, & Ma, 2017). With regard to collocations, some studies have demonstrated that learners tend to deploy fewer collocations than native speakers in oral tasks (e.g., Serrano, Stengers, & Housen, 2015) and in writing (e.g., Laufer & Waldman, 2011), even at the more

advanced levels of proficiency. “This suggests that the difficulty learners have is not only that of learning which words go together, but also learning how to employ the chunks they know” (Schmitt, 2010, p. 144). These difficulties have not only been demonstrated in the production of collocations, but also in their processing. Even advanced learners of English appear to have inadequate intuitions than native speakers concerning the frequency of collocations and seem to be slower at processing them (Siyanova & Schmitt, 2008; Sonbul, 2015). This has resulted in the common impression that collocations, and other multi-word units, proved specifically challenging for L2 learners and are more complicated to acquire.

Even though we know that collocations are challenging for L2 learners, and that collocational knowledge is seen as something that normally distinguishes between L1 and L2 speakers of a language (Wood, 2015), there is a lack of empirical research to assess in-depth the problems of Iranian EFL learners with English collocations. The present study is an attempt to fill this void by scrutinizing the knowledge of collocations of EFL learners at four academic levels and deciphering the factors affecting their performance on L2 collocations.

Literature Review

Factors Influencing Learners’ Performance in Collocation

Several empirical investigations have identified several factors that may influence EFL learners’ performance in producing collocations. The influence of the learners’ first language is among the most significant factors affecting learners’ collocational performance. A number of previous studies, in which collocational deficiencies of learners were identified via translation tasks or analyzing the participants’ essays, have indicated that most errors committed by learners are due to their heavy reliance on L1 (Farghal & Obiedat, 1995; Huang, 2013; Levitzky-Aviad & Laufer, 2013; Nesselhauf, 2003, 2005; Nguyen & Webb, 2016; Yamashita & Jiang, 2010). These researchers have consistently found that learners are highly likely to transfer restricted collocations from L1 to L2 when they are not sure of the appropriate L2 form.

Culture-based knowledge serves as another source of problem for collocations. Researchers (e.g., Alpaslan, 1993; Biskup, 1992; Teliya & Bragina, 1998 among others) have pointed out that learners from different cultural backgrounds perform differently in dealing with collocations. They posit that the use of some lexical collocations is restricted to specific cultural stereotypes, and they see metaphorical collocates as clues to the cultural data associated with the meaning of restricted collocations. However, since students lack cultural competence of the target language, they fail to notice and acquire such culturally marked collocations.

The third factor concerns individual learners’ collocational competence. Granger (2015) and Ebeling and Hasselgård (2015), by comparing the writing corpora of ESL/EFL learners and native English speakers, both reported that these learners generally demonstrated deficient knowledge of English collocations. Compared with their native-speaker counterparts, the ESL/EFL learners produced a lower percentage of conventional collocations but a higher percentage of deviant combinations. These learners tended to have a weak sense of the salience of collocational patterns.

Studies on L2 Collocations

A number of studies have examined intentional learning of collocations (e.g., Boers, Demecheleer, Coxhead, & Webb, 2014; Laufer & Girsai, 2008; Peters, 2016; Webb & Kagimoto, 2009). In a recent study, Boers, Dang and Strong (2017) investigated the impact of three types of fill-in-the-blank exercises (choosing proper verbs as component elements of collocations, completing verbs within collocations with first-letter cues given, and selecting whole phrases) on the acquisition of verb-noun collocations. Results revealed that instead of attending to individual constituents of collocations, studying collocations as

holistic units was the most efficient way of enhancing L2 collocational competence, resulting in attainments at the level of form recall and meaning recall.

Another main strand of collocational research concerns the effect of input modifications on promoting L2 collocational knowledge (e.g., Han, Park, & Combs, 2008; Lee, 2007; Sonbul & Schmitt, 2013). Szudarski and Carter (2016) examined the impact of input flood and input enhancement on L1-Polish EFL learners' acquisition of collocations. In the input flood condition, the subjects were exposed to 6 or 12 repetitions of verb-noun and adjective-noun phrases found in stories while in the input enhancement condition, they read the same texts but with the extra benefit of underlining to enhance the perceptual salience of the target items. Delayed posttests carried out two weeks after the treatment indicated that the input enhancement group outperformed the input flood group, showing collocational attainments at both the receptive (form recognition) and productive (form recall) level.

Several studies have also tried to shed light on incidental learning of collocations (e.g., Kim & Kim, 2012; Macis, 2018; Sonbul, 2015; Webb, Newton, & Chang, 2013; Wolter & Gyllstad, 2013). Pellicer-Sánchez (2017) explored incidental gains in L2 Collocations by providing the subjects with a text comprising four or eight occurrences of adjective-pseudoword collocations and asked them to read it for comprehension. One week after the reading, the learners were tested and they demonstrated augmented collocational knowledge at the level of form recall and recognition.

L2 collocational knowledge has also been the object of many corpus-based studies. Laufer and Waldman (2011), using a corpus of learner essays found that Israeli EFL learners produced far fewer instances of collocations as compared to L1 and users and they also made many collocational errors. Many other studies characterizing different groups of L2 learners (e.g., Nesselhauf, 2005; Paquot, 2008; Wang & Shaw, 2008) revealed similar difficulties with L2 collocations. Furthermore, corpus research has also indicated that miscollocations in learner English persist even after many years of learning English (Levitzky-Aviad & Laufer, 2013; Nesselhauf, 2005), with negative transfer or interference from learners' mother tongue being one of the major factors conducting to the inaccurate use of L2 collocations.

Reviewing the collocation literature reveals that there is a meager of empirical research on the relationship between Iranian EFL learners' knowledge of collocations and their academic level. On the other hand, a small number of collocational studies have investigated factors influencing learners' performance in collocation. Sadeghi (2009) focused on interlingual factors by examining collocational differences between L1 and L2. Jabbari (2014) employed the same instrument developed by Sadeghi (2009) with some variations to study the collocational differences in Persian and English and their effects on learners' production. The present study complements and extends those previous studies but attempts to fill the gaps in the literature by measuring the knowledge of collocations of EFL learners at four academic levels and identifying the factors influencing their performance on collocations. To this end, the following research questions were raised:

1. Is there a significant difference in the knowledge of lexical collocations among Iranian EFL learners at four academic levels?
2. What factors may affect EFL learners' performance in English lexical collocations?

Method

Participants

The participants were 115 university students at four academic levels: freshmen, sophomores, juniors, and seniors majoring in English language at Shahid Chamran University of Ahvaz, Iran. All of them were native speakers of Persian and had received at least 7 years of English instruction before entering the university. There were 43 males and 72 females whose ages ranged from 19 to 26. Among the participants, 20 of them were in their first year (freshman), 26 of them were doing their second year

(sophomore), 33 were in their third year (junior), and 36 students were in the fourth year (senior). The research design used in this study was a cross-sectional design and involved collection of quantitative data, however, the main shortcoming in the cross-sectional design which involves quantitative data is lack of randomized sampling process. To overcome this shortcoming, the groups were selected through cluster sampling from among all undergraduate students studying English translation and literature at the time of study.

The Pilot Study

One of the most imperative functions of a language test is to help decision-making during the trial or piloting of that test (Bachman, 1990; Bachman & Palmer, 1996; McNamara, 2001). This usually involves administering the test to a known population, so that the analysis will shed light on the behavior of the test. Therefore, in the present study, different steps were taken to collect information about the usefulness of the test itself, and for the improvement of testing procedures. The first step was item analysis. After a set of items was written, reviewed by experts, and revised on the basis of their suggestions, the collocation test was ready for experimentation tryout on a sample group of 40 EFL learners. To that end, the test was administered to a selected group of candidates. A thorough item analysis was conducted in order to obtain the index of item difficulty and item discrimination. The scores collected from this administration were analyzed using Brown's (2004) cut-off score.

The next step in the process of pilot study was to establish the desired reliability. To establish the desired reliability of collocation test, Cronbach's alpha was used. This is generally assumed as the best technique to find out inter-item consistency of any test (Best & Kahn, 2006; Brown, 2004). The reliability estimated for collocation test was .83.

The third phase of test standardization through the pilot study was to establish the validity of the test. For this purpose, concurrent validity was run. It was believed that if the newly developed test is a valid measure of a particular construct, it will significantly correlate with the outside criterion measure of the same language ability (Chen, 2008). To achieve this objective and to establish concurrent validity, the researchers first administered the newly developed collocation test (NDCT) to a group of 40 subjects. Then within two weeks' interval, the criterion collocation test (CCT), developed by Hawraz (2010) for the purpose of measuring the English collocation competence of college students in Taiwan, was administered to the same group. The results showed that the test fulfills the criterion of concurrent validity (table1).

TABLE 1

Correlation between Newly Developed Collocation Test and Criterion Collocation Tests

NDCTs		CTs
Fill-in-the-blank	Pearson correlation	.452*
	Sig. (2-tailed)	.006
	N	50
Translation	Pearson correlation	.484*
	Sig. (2-tailed)	.003
	N	30
Multiple-choice	Pearson correlation	.579*
	Sig. (2-tailed)	.000
	N	50

Note. * $p < .01$.

Instruments and Procedures

The data collection instrument in this study was a collocation test developed by the researchers. In the absence of any valid and reliable measure already available for such a purpose, a multiple-choice test of collocations was designed and validated by consulting the following resources: the *English Collocation in*

Use (2005) and *Oxford Collocations Dictionary for Students of English*. It consisted of an 80-item adjective + noun and verb + noun collocation in a multiple-choice format which was an attempt to elicit learners' knowledge of a set of particular English collocations. The participants were asked to choose the most appropriate *adjective* or *verb* from among the four options provided that could probably collocate with the bold *noun* in the sentence. The rationale behind choosing these types of collocations, namely, adjective + noun and verb + noun collocations to be the focus of the current study was two-fold. First, these two types of collocations are considered as the most common types of collocations in English (Lewis, 2000; Newman, 1988). Second, it has been reported that these types of collocations create more problems for L2 learners in comparison to other types of lexical collocations (Nesselhauf, 2003; Schmitt, 2000) (see Appendix).

This study was carried out in three consecutive weeks. First, the general English proficiency test (i.e., OPT) was administered to determine the participants' level of English proficiency. After distribution of test papers of OPT and answer sheets, they were asked to provide some demographic information regarding age, sex, field of study, i.e., Literature or Translation, and their academic levels in the specific spaces on the top of answer sheets. This test took them approximately 70 minutes to complete. When they finished, the researchers informed them that the collocation tests would be administered one week later and asked for their cooperation throughout the subsequent stages of the study. Since in this study, the academic level of students, in addition to their proficiency level, was used as an independent variable to see whether the students' collocational knowledge develops as they progress from one academic level to the next, all of the students were invited to participate in the next stages of the study. They were promised that their names and scores on proficiency test and all other information obtained from them would be kept confidential. After collecting the answer sheets, the researchers started scoring them. Their scores on OPT ranged from 32 to 86. The mean and standard deviation of the scores were computed. Finally, according to their scores, they were assigned to low, intermediate, and high proficiency level groups.

One week later, the same participants from session one, that is to say, those who took the OPT, went through procedures like that of session one. In the second session, 9 students (4 low, 2 intermediate, and 3 high proficient) were absent and 6 students (2 low, 3 intermediate, and 1 high proficient) were not interested to cooperate for personal reasons. Among the students who were absent, there were 2 freshmen, 4 sophomores, and 3 juniors and among those who ceased their cooperation 2 students were sophomores, 1 junior, and 3 seniors. The participants were not informed about their exact scores on the proficiency test. They were just told they had got acceptable scores. In this session, the researchers administered the fill-in-the-blank collocation test, along with a questionnaire. The Participants were given detailed instructions on how to take the fill-in-the-blank test and complete the attached questionnaire, stressing that immediately after answering each item they have to go through the questionnaire and specify the strategy they employed in answering each item. The questionnaire included 9 types of strategies that were expected to be utilized by participants. In addition, an open-ended choice was added for other possible strategies which might not have existed in the checklist, but, were however, utilized by the participants. It took about 50 minutes for all the participants to finish the test and the questionnaire.

Once students finished this phase, the researchers randomly selected 7 students (2 low, 2 intermediate, and 3 high proficient learners) to participate in an interview with the researchers. This interview focused on the influential factors affecting knowledge of collocation from the viewpoints of learners and the strategies they used to produce collocations.

One week later, the same participants sat for the third session. The researchers explained what the participants were supposed to do. At this session, those students who were absent or did not complete the tests in sessions one or two were given tests, if they showed interest, but their scores on the test were not included in data analysis. At this session, 6 students who completed the previous tests were absent (2 low, 1 intermediate, and 3 high proficient). They were from the four B.A. academic levels (2 freshmen, 1 sophomore, 2 juniors, and 1 senior). First the translation test was administered along with the questionnaire. The questionnaire was exactly the same as the one used along the fill-in-the-blank test. They were encouraged to ask the researchers about anything in the test they might have found difficult to

understand. This test took them about 30 minutes. Then, after a short break, the multiple-choice test of collocation was administered. The time to complete the test was set at 35 minutes initially, but more time was allocated upon their request. Immediately after the multiple-choice test was administered, the researchers began conducting the second interview. This time seven students who were not interviewed were randomly selected from three proficiency levels (2 low, 3 intermediate, and 2 high proficient students).

Data Analysis

To answer the research question and to analyze the data, first, the general distribution of the data, the means, the standard deviations, the minimum and the maximum scores of each of the four groups were calculated. Second, to test the between-group and within-group differences that might exist, a one-way Analysis of Variance (ANOVA) was carried out. Third, after obtaining the results of the one-way ANOVA, a Post Hoc multiple comparison test was conducted to find out which means were significantly different from the others. Finally, to explore the factors that might have affected the participants' performance in collocation test, each item was examined meticulously.

Results and Discussion

After the collection of the data through the instrument described above, the collected data were analyzed. Table 2 presents the descriptive statistics of the participants' performance on collocation test.

TABLE 2

Descriptive Statistics of the Participants' Performance on Collocation Test

Academic Level	N	Mean	Std. Deviation	Min	Max	95% Confidence Interval	
						LB	UB
Freshmen	20	51.71	9.84	16	78	47.31	56.37
Sophomores	26	57.25	8.39	21	80	53.71	62.51
Juniors	33	60.20	8.23	54	76	56.17	65.49
Seniors	36	70.85	4.32	59	80	68.34	72.68

As indicated in Table 2, there exist observable differences among the mean scores of the four groups. These differences are seen to be greater between freshmen and sophomores than between sophomores and juniors. While the freshmen's scores varied from 16 to 78 which show a mean score of 59.71, the sophomores' scores varied from a minimum of 21 to 80 with a mean of 65.25, suggesting a higher increase in sophomores' scores compared to those of freshmen.

However, there was a minimal difference in the juniors' scores as compared to freshmen and sophomores' scores. i.e., their scores ranged from a minimum of 54 to a maximum of 76, with a mean score of 68.20 and a standard deviation of 8.23. Another high increase in the mean score was observed between the juniors and the seniors. Seniors' mean scores show a higher significance compared to the juniors'; the minimum is 59 and the maximum is 80, with a mean score of 78.85 and a standard deviation of 4.32 indicating another high increase similar to that between the freshmen and sophomores. However, having a look at the confidence intervals of means, it can be observed that differences are less obvious, as indicated by the standard deviation 9.84, 8.39, 8.23, and 4.32 for freshmen, sophomores, juniors, and seniors, respectively.

On the whole, whereas overall differences were observed throughout the four academic groups, the magnitude of such differences between certain groups varies. That is, there is a significant difference in participants' performance on the collocation test, as indicated by their mean scores, as students pass the first year, with a difference of 5.54. However, the difference between the performance of the sophomores

and juniors is minimal, i.e. 2.95. On the other hand, the performance of the seniors is significantly higher, i.e. 10.65, as compared to that between the sophomores and juniors’.

Moreover, to determine the between-group and within-group differences that might exist, a one-way Analysis of Variance (ANOVA) was carried out, yielding the following results.

TABLE 3

One-way ANOVA Results for the Four Academic Levels on the Collocation Test

	Sum of squares	df	Mean square	F	Sig
Between groups	4300.538	2	1476.913	19.550	.000
Within groups	5947.785	112	74.746		
Total	10248.323	114			

Note. * $p < .05$.

The results of the one-way ANOVA as demonstrated in Table 3, obviously are indicative of a significant difference in the collocation knowledge both between and within the four academic groups, $F(2, 112) = 19.550$, at the $p < .05$ level.

Post Hoc Test (Multiple Comparisons)

After obtaining the results of the one-way ANOVA, in an attempt to find out which pairs of means were significantly different from each other, a Post Hoc multiple comparison test was carried out using Tukey’s Honestly Significant Difference (HSD). Table 4 illustrates the multiple comparisons of the means of the four groups in the collocations test.

TABLE 4

Multiple Comparisons of the Means for the Four Academic Groups in the Collocation Test

(I) Education Level	(J) Education Level	Mean Difference (I-J)	Std. Error	Sig	95% Confidence Interval	
					Lower Bound	Upper Bound
Freshmen	Sophomore	-5.54	2.799	.179	-12.52	1.55
	Junior	-8.49*	2.799	.012	-15.47	-1.40
	Senior	-19.14*	2.799	.000	-27.32	-13.05
Sophomore	Junior	-2.95	2.732	.703	-10.13	-4.23
	Senior	13.6*	2.732	.000	-21.78	-7.44
Junior	Senior	-10.65*	2.732	.000	-18.83	-4.47

Note. * $p < .05$.

As can be seen in Table 4, there was a significant difference among the mean scores when freshmen group was compared with seniors and juniors. That is to say, the highest significant difference was seen between freshmen and seniors, at $p < .001$, followed by a difference between freshmen and juniors, at $p = .012$. A significant difference was also found between sophomores and seniors, at $p < .001$.

On the other hand, as for the differences in the mean scores of sophomores and juniors, Table 4 illustrates a non-significant difference between these two groups, as indicated by the significance level, .703. However, there was a significant difference between the mean scores of sophomores and seniors, as indicated by significant level .000. As far as the difference in the mean scores of juniors and seniors is concerned, Table 4 depicts a significant difference at $p < .001$.

However, the question that may be raised here is why the greatest differences were observed in the beginning and the final years of learning English at university, as was seen in the participants’ performance on test of collocations. The following reasons may, at least partially, justify such differences:

One way of justifying the increase from the first academic level to the second level is considering the type and number of language courses in the course program presented by Language Departments during

the early years of language instruction. Based on the course plan of Language Departments in Iran, students majoring in English in universities are required to pass some language skill courses. That is, freshmen take six or seven language skill courses such as reading comprehension, English grammar, listening comprehension, and writing skills. However, in higher levels the quantity of such courses gradually reduces for instance, in the second year, out of the eight main courses, only three language skill courses are presented. Such reduction in language skill courses is more evident in the juniors and seniors' curricula, where only an essay writing course may be presented. Consequently, the large quantity of language courses in the first academic year, and gradual reduction of such courses as the learners progress to following years, may have contributed to the learners' knowledge of English and the significant difference in their performance on the collocation test.

Another way of explaining observed differences is that when learners move from the sophomore academic level and progress in junior academic level, they become pre-occupied with the specialized courses, namely, linguistics courses and English literature and the subject matter of those courses, as a result they pay less attention to the form of the language. The progress in the learners' performance in the senior academic level may be justified by the fact that, at this stage of their education, learners have already gained adequate linguistic knowledge from the total number of courses throughout the preceding four years of studying language at university.

As for the marginal difference observed between the sophomores and juniors' performance on the test of collocations, it may be argued that the participants' knowledge of collocations may not have been reflected precisely, and therefore these differences could be ascribed to factors such as the testing conditions and the test complexity. Overall, it can be argued the improvement of students' knowledge of collocations in the four academic groups can be described as if they pass through three stages; stage one where they exhibit a high improvement as they pass their first year, followed by what may be termed a 'passive stage' in which they exhibit only a minimal improvement, and later, they pass through a stage in which they show a considerable improvement.

This finding may support the nonlinearity nature of vocabulary growth (Ellis, 2016; Ellis & Wulff, 2015; Meara, 1996; Melka, 1997; Read, 2004; Schmitt, 2010). For these scholars, word acquisition is not a steady progression along a continuum and has shifting and transition zones, especially from receptive to productive knowledge: two levels of word knowledge which they believe characterize proficiency levels of learners. Nevertheless, the ever-increasing patterns emerged in mean scores of the four academic groups are indicative of the fact that their knowledge of collocations runs parallel to their overall knowledge of English partly as a result of studying English throughout academic years.

The results of the present study are supported by a number of previous studies (e.g., Diao, 2004; Koya, 2003; Wu, 2005) in that they emphasized that learners' knowledge of collocations develop as they move from one learning level to the next. Koya (2003) conducted a survey to examine the differences in the knowledge of English lexical collocations among three academic levels of Japanese EFL. He found that there were significant differences in learners' knowledge of collocations in the comparison between the freshmen and sophomores while there was a slight difference between the sophomores and juniors. Koya attributes the increase from the first level to the second to the quantity of language courses in the intensive course programs in the beginning years of college. He argues that although it might be expected that knowledge of collocation essentially increases at high rate as function of higher learning level, this expectation is not realized due to inadequate emphasis given to collocational knowledge in the books, and the instruction that students receive in later stages of language learning at university.

Similar findings were reported by Diao (2004) who did a study to examine English majors' knowledge of chunks and collocations included. The subjects of the study were freshmen and seniors of English majors. It was found that seniors' collocation competence was better than that of freshmen. She attributed this preference to the fact that they had more exposure to English.

In a study to measure collocational knowledge of Taiwanese EFL learners at three academic levels, Wu (2005) found that the higher academic level the students are the better their knowledge of collocations. Significant differences in their mean scores were found between seniors and each of the other levels. On

the other hand, these findings contradict the result of research by Ganji (2012) which revealed that university students seem to lose their collocational competence as they move toward later years of study. In this study the grammatical collocation knowledge of students at three academic levels, freshmen, sophomore, and juniors was examined. It was found that freshmen had the highest performance, followed by juniors and sophomores. He put forward different reasons which might justify this. He argued that one probable reason why freshmen had a better mean score is that most of these students have been to English Institutes before coming to university. Another reason given was that students have 3 reading courses in the first terms of their studies at university, so they deal with different types of texts and do vocabulary exercises. But later on, students' courses are all about translating different texts; the only thing they do is to read the text quickly, and search for Farsi equivalents. As a result, they do not pay much attention to the source language vocabulary, because there is a dictionary right next to them all the time.

The second question of the study was concerned with the factors that may affect EFL learners' performance in English lexical collocations. A thorough examination of responses provided by the participants reveals that participants' performances on collocation tests have been under the influence of interlingual, intralingual, cultural factors, and frequency of collocations.

Interlingual Factors

One of the factors assumed affecting learners' performance on certain collocations is the influence of their native language, here Persian. That is, as in other aspects and components of language, learners' L1 influences the way they comprehend the collocational relations between words and expressions and the way they collocate words in L2. With regard to the interlingual problems, Sadeghi (2009) argues that L1 interference account for misunderstanding and production of wrong collocations. In the same way, Granger (2015) believes that EFL learners tend to make mistakes due to the difference between English and their native language. If the role of participants' L1 in choosing and producing collocations is probed meticulously, we would observe some possible L1 influences on choosing and producing the combinations. Because in a study such as the present one there was no way of guarantee whether first language influences actually took place, similarity or approximation was regarded as indications that L1 influence was likely. For instance, if for item 13 of our verb + noun collocation, 'I can't any **conclusions** from what she said' *get* or *take* was chosen by some participants, the fact that Persian has *نتیجه گرفتن* and that *گرفتن* is related to *get* or *take* in meaning, led to the assumption of L1 influence. Or in the case of the adjective + noun collocation (item 23) 'The **administration** of company created many serious problems', some participants chose the word *weak* to collocate with *administration*. This may be due to fact that Persian speakers usually use the adjective *weak* when they want to express incompetent or inadequate activities that are involved in managing the work of a company or organization whereas in English the adjective *poor* is used to express such meaning.

Some other examples of collocation mistakes that were probably influenced (though not usually exclusively caused) by the learners' first language are presented in Table 5:

TABLE 5
Collocation Errors due to Transfer from the Learners' L1

Collocation pattern	Learner-made collocations	Target collocations	
verb+ noun	tie a pact	make a pact	
	put an eye	keep an eye	
	see a dream	have a dream	
	offer tribute	pay tribute	
	get a profit	make a profit	
	do measures	take measures	
	have medicine	take medicine	
	adjective+ noun	empty tape	blank tape
		closed alley	blind alley
		calm sleep	sound sleep
prominent lights		leading lights	
clear violence		naked violence	
hard rain		heavy rain	
hot argument		heated argument	
	water cooked egg	boiled egg	

Although the above examples are just a few cases for which we assume the first language may have played a role, they can be support of the fact of some interlingual impact. Hence, the crucial role that L1 plays in the selection or producing English collocations should not be ignored. The widespread strategy of transfer (negative and positive) in producing collocations in a study by Wang and Shaw (2008) does add to the assumption that learners' L1 is of influence on collocating words. EFL learners fairly take it for granted that there is a one-to-one correspondence between L1 and L2. Consequently, when the participants did not know a certain collocation, they relied on their first language and negatively transferred collocations from their L1. Farghal and Obiedat (1995) have also reached the same conclusion in EFL. They have found that Jordanian students performed well when targeted collocations had an Arabic equivalent, but had problems with collocations that had no equivalents in Arabic. For example, students used *heavy tea* for the targeted collocation *strong tea* (Farghal & Obiedat, 1995). On the other hand, the influence of the L1 is not always negative. There could be positive transfer that helped the participants to locate the correct combinations. That is, in responding to certain test items, participants were helped by positive transfer from their L1, Persian. In other words, some collocations had equivalents in Persian, and thus were easy for participants to respond to. For instance, for the following items which the participants had to provide the missing collocate partner in the blanks, the participants' L1 probably influenced their performances positively, hence producing *heavy traffic* in sentence (1), *break a promise* in sentence(2), *golden* in sentence (3), and *have a responsibility* in sentence (4).

- (1) We were stuck in.....**traffic** for more than an hour.
- (2) What I'd add is that there is a right way to a **promise** when you have no choice.
- (3) He wasted a (n) **opportunity** when he missed from the penalty spot.
- (4) We all..... **responsibility** to protect the environment.

In addition to the above-mentioned examples, the following items are among the assumed positively-transferred items.

1. last chance
2. hasty decisions
3. do housework
4. give advice
5. gain experience
6. take control of
7. complex network of roads
8. draw a line

9. provide accommodation
10. greasy hair
11. break somebody's heart
12. strong accent
13. decayed tooth
14. break the strike
15. keep a secret
16. vicious circle

The researchers, who are Persian native speakers, arrived at the above conclusion in consultation with two other educated Persian scholars.

Therefore, positive transfer occurs when the target collocations match those of L1, that is, when a collocation has a direct translation equivalent in learners' L1. Such a strategy was found to be used by L2 learners from other cultures as well. Bahns and Eldaw (1993), Gitsaki (1999), and Wolter and Gyllstad (2011) found that, in ESL, collocations which had equivalents in learners' L1 were easier, and thus were more likely to be elicited than the ones having no equivalents in learners' L1. For this reason, Bahns and Eldaw (1993) suggested that, since the number of collocations is too large to cover, the deliberate teaching of collocations should be limited to collocations that have no equivalent in learners' L1. Therefore, when teaching collocations, teachers need to compare and contrast similar collocations in L1 and L2. Learners can thus attend to the lexico-semantic distinctions between the two languages and reduce errors caused by L1 interference.

Intralingual Factors

In addition to interlingual factors, intralingual factors may have influenced participants' performance on the tests of collocations. According to Richards (1974), intralingual errors are "items produced by the learner which reflect not the structure of the mother tongue, but generalizations based on partial exposure to the target language" (p.6). In other words, intralingual errors occur because of limited knowledge or learning experience of target language (215). Some instances of this can be seen in the following examples: *greasy for oily in sentence (5), *decayed for rotten in sentence (6) and *beautiful for fine in sentence (7).

- (5) This cream is good for dry skin-that one would be better for**skin**.
- (6) There was a disgusting smell in the house - a bit like a(n)..... **egg**.
- (7) In addition to fashion, Bond Street is also renowned for its auction houses and for its
art galleries.

As it is evident by these examples, one constituent of collocations was replaced by a synonymous word. Synonyms are words that are similar or close (Palmer, 1981) in meaning; however, when they co-occur with different words they can form various collocations which are different in meaning. Several researchers (e.g., Boonyasquan, 2006; Gitsaki, 1999; Webb & Kagimoto, 2011) have argued that many EFL learners' collocational errors result from using the synonym of the constituents of the collocations. In the same way, in the current study if we thoroughly examine the participants' responses we see further evidences of incorrect collocations which were produced because the participants chose or provided the synonym of the target (i.e., correct) collocate. For example, incorrect collocations such as *empty tape, *get a revenge on, and *fast or quick increase, were produced because the participants substituted blank for empty, take for get, and rapid for fast or quick as the correct collocations were blank tape, take a revenge, and rapid increase. These practices recall Lennon's (1996) study in which he explored advanced EFL learners' errors in producing some common verbs.

Cultural Factors

Cultural differences are also assumed to be responsible for learners' failure to do well on some culturally-marked collocations. In other words, culture-related knowledge which according to Teliya and Bragina (1998) is another dimension embodied in the issue of lexical knowledge is thought to have influenced the participants' performance on some items of collocations. For instance, *dye hair*, *false teeth*, and *sick joke* are examples of culturally specific concepts which not surprisingly many participants were found to have problems with them since these collocations are expressed differently in Persian. Such collocations are produced by Iranians as **darken hair*, **artificial teeth*, and **tasteless joke* respectively. Therefore, lack of cultural competence might be responsible for learners' failure to tackle with such culturally marked collocations.

Frequency of Collocations

The results also showed that the higher frequent a collocation was, the more participants answered it correctly. In other words, it can be argued that the participants produced correctly those collocations that had previously been encountered. From this analysis, it can be seen that collocations that were produced correctly by participants were mostly from among the high-frequency collocations. For instance, the participants had little problem with collocations *do shopping*, *gain experience*, *do housework*, etc. The reason may be due to the fact that such collocations appear repeatedly in their course books. Hence, high frequency of collocations leads learners to produce certain collocations correctly. This claim is supported by Durrant (2008), Webb, Newton, and Chang (2013) and Szudarski and Carter's (2016) studies. Based on the findings of these studies, L2 learners can learn collocations from input that provides repeated exposure to collocations, and that frequent exposure to collocations can radically improve learning. L2 learners are likely to acquire collocations that are encountered frequently during learning sessions. If the learners are frequently exposed to certain collocations, they often recognize them and automatically produce them correctly since they have already stored it in their minds and they make use of it as a ready-made chunk whenever is needed. Accordingly, it appears that low exposure to collocations or input including collocations lead to collocational unawareness, which causes deficiency of knowledge of collocations. Therefore, it can be inferred that low frequency of collocations is a major source of collocational errors.

To sum up, it can be concluded that the existence of similarity or dissimilarity between languages, semantic restrictions, cultural differences, and frequency of certain collocations are among factors which influence EFL learners' performance on collocations.

Conclusion

This study sought to ascertain the collocational knowledge of EFL learners at four academic levels and also the factors which might exert an influence on their performance on collocations. It was found that Iranian EFL learners had some awareness of collocations in English. Additionally, it became clear that proficiency level and academic level play a great role in acquiring knowledge of collocations. This was reflected in the fact that as students' proficiency and academic level increased, their knowledge of English collocations enhanced. However, these findings did not imply that Iranian EFL learners had no problem with English collocations at all. Despite the fact that participants' collocational knowledge was found to develop along their academic and proficiency levels, participants did have some problems with certain collocations. As observations on participants' performance on individual collocation items and interviewees' own observations revealed, some of them had serious problems with this aspect of language. The participants' difficulty with collocations was attributed to several reasons: L1 interference (interlingual factor), generalization in the target language (intra-lingual factor), cultural differences

between Persian and English, low frequency of some collocations, learning words in isolation, teachers and teaching materials, and the existence of numerous confusable words in English language. It was also revealed that EFL learners' productive knowledge of collocations did not develop as their receptive knowledge of collocations did. In addition, it was found that all three groups, i.e., high, intermediate, and low proficiency learners relied more or less on approximately similar strategies in the process of producing correct or incorrect collocations.

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Appendix

Sample of Items

Choose the **verb** or **adjective** that best collocates with the **bold noun** in each sentence.

1. Whose turn is it to the **housework**?
a) carry out b) perform c) make d) do
2. Witnesses are required to..... the **oath**.
a) make b) take c) have d) carry out
3. Can you an **eye** on my car while I go in the shop?
a) lay b) catch c) put d) keep
4. He his **thirst** with cold juice.
a) wetted b) smashed c) quenched d) broke
5. He tried to her some **advice** but she wouldn't listen.
a) suggest b) propose c) make d) give
6. In his mind, Jack had..... a **crime** which was unforgivable.
a) **committed** b) made c) performed d) conducted
7. I wonder if you could me a **favor** and carry this box for me.
a) do b) give c) make d) provide
8. I a bad **dream** last night and woke up sweating.
a) made b) saw c) got d) **had**
9. He vowed to **revenge** on the man who had killed his brother.
a) obtain b) take c) make d) gain
10. We need to **action** immediately!
a) get b) take c) do d) make
11. Let's a **line** under the whole episode and try to continue our work.
a) design b) write c) paint d) draw
12. We have to a **vocabulary test** every Friday.
a) accomplish b) make c) perform d) do
13. Unless we talk about this together, we won't any **conclusions**.
a) obtain b) get c) take d) draw
14. She was studying French and went to France to **experience**.
a) take b) expand c) get d) achieve
15. This book will the **needs** of students.
16. I don't know him very well. It is just a(n) **acquaintance**.
a) accidental b) casual c) unanticipated d) spontaneous
17. He took the next turning to the left as he had been told, but found himself in a..... **alley**.
a) blocked b) closed c) shut d) blind
18. The term**art** is used to refer to the visual arts such as painting and architecture.
a) good b) **fine** c) pleasant d) nice
19. She is a **smoker**. That's why she always stinks of smoke.
a) hard b) **big** c) strong d) heavy
20. The **traffic** made me late for my appointment.
a) hard b) heavy c) violent d) severe
21. Brenda doesn't like olives, capers or anything with a **flavor**.
a) heavy b) hard c) strong d) powerful
22. Today is your **chance** to submit your final project.
a) ultimate b) last c) absolute d) final
23. The college loses a lot of money through **administration**.
a) poor b) low c) weak d) short

24. I've had this **headache** ever since I woke up this morning.
a) potential b) dominant c) primitive d) **chronic**
25. Tolstoy's experiences of war had a **effect** on his work.
a) deep b) primitive c) profound d) genuine
26. They must have a(n) **dislike** for the job.
a) acute b) sever c) intense d) strong
27. It was a(n) **joke**.
a) morbid b) sick c) unwholesome d) diseased
28. We need a(n) **tape** so that we can record the film.
a) empty b) clear c) clean d) blank
29. The results of the research should be used for the **good** rather for individual profit.
a) public b) popular c) common d) collective
30. She hated his **humor**.
a) bitter b) ill c) sick d) harsh