

Collocations in High School and Pre-University English Textbooks Versus New Interchange Book Series

Ali Roohani

Shahrekord University, Iran

Collocations help L2 learners to build up chunks of language and look for patterns of use, but they have not received enough attention. Given this, the present study investigates the extent to which lexical and grammatical collocations are used in high school and pre-university English textbooks, compared with the *New Interchange* book series. Although both instructional textbooks claim to improve EFL learners' language and communicative skills in an integrated syllabus, the former ones are produced by the Ministry of Education, written by nonnative speakers of English and taught in public schools in Iran, whereas the latter ones are produced internationally by native speakers of English and taught in many private language institutes in Iran. Besides, to make a better judgment about the saliency of collocation use in the above textbooks, this study explores the comparative performance of groups of EFL learners studying the aforementioned textbooks in two different teaching situations in Iran to see how they perform on the collocation tests. To achieve the purposes of this study, content analysis was first carried out in the corpora obtained from the textbooks to see the frequency and proportion of lexical and grammatical collocations. Second, textbook-based collocation tests were developed and administered to the participants of this study, who consisted of 200 Iranian EFL learners, including 100 students at high and pre-university schools as well as 100 learners in English language institutes. The results showed that the frequency and proportion of collocations in the high school and pre-university English textbooks were generally lower

than those in the *New Interchange* book series, but the frequency differences between the two types of textbooks were not statistically significant in the chi-square tests. Also, *t* tests indicated that the learners studying the *New Interchange* book series in the private language institutes had a better performance on both lexical and grammatical collocation tests. Finally, the pedagogical implications for EFL teachers and materials developers are presented.

Kew words: grammatical and lexical collocation, textbook, public school, language institute

INTRODUCTION

The lexical approach to second language teaching has received interest in recent years as an alternative to grammar-based approaches (Moudraia, 2006). This approach is based on the idea that an important part of language learning is the ability to comprehend and produce lexical phrases as unanalyzed wholes or “chunks,” and these chunks become the raw data by which learners perceive patterns of language traditionally thought of as grammar (Lewis, 1993, p. 95). Thereby within the lexical approach, special attention is directed to what is called the ‘collocations’ or expressions that include institutionalized phrases and sentence frames.

Collocating is defined as “the readily observable phenomenon whereby certain words co-occur in natural text with greater than random frequency” (Lewis, 1997, p. 8). In McCarthy and O’Dell’s (2005, p. 4) terms, collocations are “natural combination of words”. Also, Laufer (1991, cited in Faghieh & Sharifi, 2006, p. 3) states that “knowing a word implies the knowledge of possible combinations into which a given item can enter. Such combinations are called collocations”, which are not usually determined by the logic; rather they are arbitrary. They are as recurrent combinations of two linguistic elements which have a syntactic relationship. One of the elements of collocations is called ‘base’, which keeps its usual meaning, while the other, the ‘collocate’, is dependent on the other and usually has a less

transparent meaning (McKeown & Radev, 2000, p. 3). This distinction is best illustrated by the collocations which include ‘support’ verbs as in the collocational phrase *take a bath*; the word *bath* is the ‘base’ and the support verb is *take*, which is the ‘collocator’.

Attaching significance to collocations, Gabrielatos (1994, p. 2) states that “collocations are essential, indispensable elements with which our utterances are very largely made.” Likewise, McKeown and Radev (2000) state that collocations are useful in a variety of ways. They can be used for disambiguation and help foreign language learners to build up chunks of language and look for patterns of use. Also, they can provide scaffolding for new pieces of language.

Another issue is the dominant role of textbooks in the language classroom, which should not be ignored as they form the bulk of classroom activities. This can be seen from Young and Reigeluth’s (1988) study in which they found that as much as 90% to 95% of class time was spent by students interacting with textbooks. This high reliance on textbooks is also true among English teachers at senior high schools in many countries, including Iran. For instance, Hsu (2004) states that most of the surveyed English teachers in Taiwan at local senior high schools follow at least 75% of the contents of their textbooks in their teaching.

In Iran, students have the opportunity to learn English as a foreign language (EFL) either in public schools or private language institutes. These teaching situations differ in the choice of English language teaching (ELT) materials. In public schools, the Ministry of Education is in charge of producing materials that are subsequently passed on to the language teachers in the schools for classroom use. In this situation, EFL teachers rely on the textbooks written by Iranian nonnative speakers of English. These textbooks are produced to improve EFL learners’ language and communicative skills. Since the Islamic Revolution in Iran, all instructional English textbooks taught in public schools have been written by Iranian materials developers, who are nonnative speakers of English, and attempts have been made to localize the ELT materials to maximize the appropriacy of teaching materials

to suit the particular circumstances in Iran. Therefore, EFL teachers and learners in public schools have no choice, but to cope as best they can with the handed materials. In contrast, private language institutes do not usually produce their ELT materials. They almost always adopt commercial instructional textbooks available in the open market. Therefore, they have a fairly amount of choice in the ELT materials they select.

As a reaction against the inefficiency of the instructional English textbooks used in public schools in Iran, many EFL learners who are dissatisfied with the textbooks prefer to attend private language institutes where they can study the instructional textbooks produced by native speakers of English. *New Interchange* book series are one example of such learner-friendly instructional textbooks, which teach students how to use English for everyday situations and purposes related to school, social life, and work. “The underlying philosophy [of *New Interchange*] is that learning a second or foreign language is more rewarding, meaningful, and effective when language is used for authentic communication. Throughout *New Interchange*, students are presented with natural and useful language” (Richards, Hull, & Proctor, 2009a, p. iv). It is claimed that it “provides students with the skills they need to use English outside the classroom” in real life situations (Richards, Hull, & Proctor, 2009c, p. v). However, some of the commercially produced ELT textbooks in the open market in Iran might fall short of expectation. As Richards (2010) states, they might not relate more closely to language learners’ needs in the real world. They might have artificial texts which cannot reflect the authentic features of real-world uses of language. One such feature of language is the use of collocations; collocational knowledge as part of lexical competence is one area which should be the center of attention for both EFL teachers and materials developers. Despite this, it seems that some textbook writers pay scant attention to the use of collocations. Given the lack of empirical evidence, it is not clear to what extent collocations in the ELT textbooks in Iran, whether those handed to the EFL teachers by the Ministry of Education or those adopted by the private language institutes, is used. Therefore, this study aims at exploring the

comparative use of collocations in two types of instructional textbooks, that is, high school and pre-university English textbooks versus the *New Interchange* book series. The former are used in public schools and the latter are frequently used in private language institutes in Iran. It is expected that the results of this study help us to make better decisions on the selection or evaluation of textbooks in the context of EFL learning in Iran.

REVIEW OF LITERATURE

Palmer (1993, p. 4) states that collocations are string of words that must or should be learned as “an integral whole or independent entity, rather than by the process of piecing together their component parts.” As Howarth (1998) points out, they often fall around the middle of a continuum whose end points are free combinations, which are phrases constructed using rules of syntax, and idioms, which allow little or no variation in form and whose meaning cannot be determined by the literal meanings of the individual words. However, there is no single approach and classification with respect to collocations.

Advocates of the lexical approach are of the opinion that the meaning of a word is determined by the companies it keeps. Lewis (1993) maintains that as native speakers we do not direct our attention to the grammar of our native language since we do not have much concept of our grammar, instead we make use of a large store of prefabricated chunks. This is a technique that is in contrast to just giving second/foreign language (L2) learners grammatical concepts and asking them to combine them together in a sentence. In support of this approach, Halliday (1966) has stressed that collocations cut across grammar boundaries. For instance, he believes that *he argued strongly* and *the strength of his argument* are grammatical transformations of the initial collocation *strong argument*. In his works, he highlights the crucial role of collocations in the study of lexis.

To move further, semantic approach goes beyond the sheer observation of

collocations. It examines them from the semantic point of view. The main issue in semantic approach is to find out why words collocate with certain other words; for example, why we can say *blonde hair*, but not *blonde car*.

According to structural approach, collocations are determined by structures that occur in patterns. Therefore, as Gitsaki (1999) states, the study of collocations should include grammar, which contrasts with the two aforementioned approaches: the lexical and semantic ones.

Based on the approach taken towards collocations, different terms are used to classify collocations. According to Lewis (1998, cited in Deveci, 2004), collocations, depending on their frequency of occurrence, can be strong (e.g., *rancid butter*), medium (e.g., *hold a meeting*), weak (*white wine*). But Sinclair (1991) divides collocations into two categories: the 'upward' and 'downward' ones. The first group consists of words which habitually collocate with the words more frequently used in English than they are themselves, e.g. *back* collocates with *at*, *down*, *from*, *into*, and *on*, all of which are more frequent words than *back*. The second group consists of words which habitually collocate with words that are less frequent than they are themselves; for example, the words *arrive*, *bring* are less frequently occurring collocates of *back*. Sinclair makes a sharp distinction between those two categories claiming that the elements of the 'upward' collocation (mostly prepositions, adverbs, conjunctions, pronouns) tend to form grammatical frames while the elements of the 'downward' collocation (mostly nouns and verbs), by contrast, give a semantic analysis of a word.

According to DeCarrico (2001, cited in Celce-Murcia, 2001), collocations can be of two types: grammatical and lexical collocations. According to him, grammatical collocations are those in which a noun, verb, adjective or verb frequently co-occurs with a grammatical item, usually a preposition. For example, *reason for* and *by accident* are grammatical collocations. On the other hand, lexical collocations differ in that they do not contain grammatical words, but consist of combinations of full lexical items (i.e., noun, verb, adjectives, and adverbs); for examples, *pay a visit* and *spend money* are lexical collocations. Lexical collocations, in contrast to grammatical

collocations, normally do not contain prepositions, infinitives, or clauses. Furthermore, McKeown and Radev (2000) contend that semantic collocations are lexically restricted word pairs, where only a subset of the synonyms can be used in the same lexical context.

All taken, most of the studies carried out on the collocations have been done on the lexical rather than grammatical collocations. For instance, using an elicitation test, Faghieh and Sharifi (2006) carried out a study on the lexical collocations with more than one hundred male and female EFL students at Alzahra University of Tehran and the Islamic Azad University of Torbate Heydarieh. The analysis of the data revealed that the confusion was evident in the performance of language learners and this confusion in the use of collocations support the contrastive analysis and interlanguage studies; they also indicated that there was a positive correlation between the learners' overall proficiency in English and their knowledge of collocations. Finally, they concluded that collocation confusion is indeed a common error in Iranian EFL learners' interlanguage.

Rahimi (2005) also examined the role of systematic exposure to lexical collocations in mastering English vocabulary by Iranian English learners. In this study, 60 English learners in Level 6 at Mehr Language Institute in Marvdasht were selected as the subjects, divided into two control and experimental groups. The control group received the meaning of new words in the coursebook from the teacher, and the experimental group was taught the meaning of words in at least two collocation contexts. After analyzing the results of the given test of collocations, the researcher came up with the point that a systematic teaching of lexical collocations positively affected vocabulary learning by the Iranian EFL learners.

In another study, Keshavarz and Salimi (2007), who carried out a study on the collocational competence and cloze test performance, reported that the relatively high and positive correlations among the scores on the collocation tests, and the scores on the cloze tests would indicate that collocational competence and proficiency level are closely associated. This is in line with the claim that the proficient language users know a large number of

collocational patterns. Also, Shirvani (2007, cited in Keshavarz & Salimi, 2007) in his study on the nature of lexical collocational errors made by Iranian EFL learners explored whether there were any types of lexical collocational errors which would be the most/least common for Iranian EFL learners. In addition, he investigated whether the difference between the participants' use of correct or incorrect lexical collocations was significant among 50 TEFL students at Islamic Azad University of Shiraz. The materials of the study were fifty free writing essays and compositions written by the subjects. The results of the study showed that, contrary to the category of lexical collocations *Adverb + Adjective*, the collocational category *Adjective + Noun* was more problematic for the Iranian EFL learners. He concluded that most of the lexical collocational errors found in his study were as a result of transfer from Persian.

None of the above studies, however, investigated collocations in the instructional textbooks. Given a lack of empirical research on the lexical and grammatical types of collocations, this study is intended to examine both types of collocations in the high school and pre-university English textbooks, compared with the *New Interchange* book series, which are commonly taught in many private language institutes in Iran. For the past 30 years, great modifications have been made to the EFL instructional textbooks used in public high and pre-university schools in Iran to increase the relevance of the textbook content in relation to Iranian EFL learners' interest and their educational, academic, and cultural needs. Recently, these textbooks have been adapted to reflect communicative approaches in teaching. However, these textbooks have been criticized partly because many EFL teachers claim that they do not provide authentic exposure to real language despite the fact that they can reflect local content, issues and concerns. In the real-life like language, we talk of being *madly in love* in preference to being *crazily in love*, *tea* is usually *strong*, but *cars* are *powerful*, and so on. Alternatively, many EFL teachers advocate the internationally marketed instructional textbooks, produced by native speakers of English and adopted as main ELT materials by many private language institutes. According to them, these textbooks,

unlike high school English textbooks, include native speaker corpora of natural language use where we can find ourselves in the presence of large numbers of what would be typically judged as fluent speakers who perform accurately in the sense that none of the lexico-grammatical principles such as collocations are violated. They claim that collocational proficiency indicated by the presence of large numbers of collocations can differentiate the instructional textbooks written by native writers from nonnative writers. Nonetheless, there might be potential problems with the commercially produced instructional textbooks written by native speakers as they tend to be specially written to incorporate teaching points, not representative of real language use. Therefore, it is possible that little attention to the use of collocations, which is a mark of natural use of language, has been paid in these textbooks. With such array of commercial textbooks, such as the *New Interchange* book series, teachers and others responsible for choosing materials need to be able to make informed judgments about textbooks. This study is intended to help EFL learners and teachers to make a better decision on high school and pre-university English textbooks versus the *New Interchange* book series, which are used in two different teaching situations in Iran and have an integrated, multi-skills syllabus.

Besides, good language teaching materials, as Tomlinson (1998) points out, should draw the learners' attention to linguistic features of the input; they should provide opportunities for outcome feedback. Accordingly, instructional textbooks should draw EFL learners' attention to the use of collocations and help them to develop their collocational competence. As Richards (2010) points out, ELT materials should facilitate learner self-investment in using language which reflects the features of language experienced by native language users and, as such, collocations are "the probabilistic outcomes of repeated combinations created and experienced by language users" (McCarthy, 2006, p. 8). In light of this view, it is important to seek whether the instructional textbooks such as high school and pre-university English textbooks, as compared with the *New Interchange* book series, can make EFL learners invest on their collocational competence, given

that collocational violations are so frequent in the language output by many Iranian EFL learners. To this end, this study seeks to compare two groups of students, that is, those who study high school and pre-university English textbooks versus those who study the *New Interchange* book series, to see how they perform on textbook-based collocation tests. It is assumed that a better performance on textbook-based collocation tests can indicate that the textbook in question is more effective in highlighting collocations and helping EFL learners to develop their collocational knowledge. Therefore, the present study investigates the following research questions:

1. To what extent the lexical and grammatical collocations are used in high school and pre-university English textbooks, compared with the *New Interchange* book series?
2. Is there a significant difference in the frequency of lexical and grammatical collocations between high school and pre-university English textbooks, on the one hand, and the *New Interchange* book series, on the other hand?
3. Do the EFL learners who study high school and pre-university English textbooks and those who study the *New Interchange* book series differ significantly in their performance on collocation tests?

In line with the research questions, this study has addressed the following null hypotheses:

- H₀₁: There is no significant difference in the frequency of lexical and grammatical collocations between high school and pre-university English textbooks, on the one hand, and the *New Interchange* book series, on the other hand.
- H₀₂: There is no significant difference in the collocation test scores between the EFL students studying high school English textbooks (*English Book 1*, *English Book 2*, and *English Book 3*), on the one hand, and those studying the *New Interchange* book series (*Intro*, *Book 1*, and *Book 2*), on the other hand.
- H₀₃: There is no significant difference in the collocation test scores between the EFL students studying pre-university English textbook,

on the one hand, and those studying the *New Interchange 3*, on the other hand.

METHOD

Participants

Two hundred EFL students, randomly selected, participated in this study. They included 100 high school and pre-university students at Maedeh, Mehregan, and Ayatollah Khamenei Schools and 100 EFL students at Hejrat and Bartar Language Institutes in Dehdasht. These schools were randomly selected from all schools and institutes in Dehdasht in Kohgeloyeh-va-Boyerahmad Province. Among them, 20 were studying *English Book 1* (Birjandi, Sohaili, Nowroozi, & Mahmoodi, 2008), 20 were studying *English Book 2* (Birjandi, Nowroozi, & Mahmoodi, 2009), 20 were studying *English Book 3* (Birjandi, Nowroozi, & Mahmoodi, 2009), 40 were studying *Learning to Read English for Pre-university Students* (Birjandi, Ananisarab, & Samimi, 2006), 20 were studying *New Interchange Intro* (Richards, 2009), 20 were studying *New Interchange 1* (Richards, Hull, & Proctor, 2009a), 20 were studying *New Interchange 2* (Richards, Hull, & Proctor, 2009b), and 40 were studying *New Interchange 3* (Richards, Hull, & Proctor, 2009c).

Procedure

This study was conducted in two stages. In the first stage, the content of the aforementioned instructional textbooks were analyzed to find the frequencies and proportions of the collocations used in the textbooks. Because the number of the units and the density of the texts differed across the instructional textbooks used in the two teaching situations (i.e., the public schools and the private language institutes), just the first 7000 words, including content and function words, from each textbook were taken into consideration. Then, the frequency of the collocations was obtained from the

consideration. Then, the frequencies of the collocations were obtained from the corpus of 7000 words from each textbook. The word count was done through the *Wordsmith* software. Meanwhile, the workbooks and the transcription of video and audio parts in all the textbooks were excluded from the analysis.

To analyze the content of the textbooks, DeCarrico's (2001, cited in Celce-Murcia, 2001) classification of grammatical and lexical collocations was used. Following Benson, Benson, and Ilson (1997), eight major types of grammatical collocations were considered for the analysis. These eight types are designated here by G1, G2, and so on:

- G1. Noun + preposition: e.g., *blockade against*
- G2. Noun+ to (infinitive): e.g., *a pleasure to do*
- G3. Noun + that clause: e.g., *an agreement that*
- G4. Preposition + noun combinations: e.g., *by accident*
- G5. Adjective + preposition combinations: e.g., *angry at everyone*
- G6. Predicate adjective + to (infinitive): e.g., *It was necessary to work.*
- G7. Adjective + that clause: e.g., *afraid that*
- G8. Nineteen English verb patterns (A, B, C... S)
 - A. Verb+ to (allowing the dative movement transformation): e.g., *He sent the book to him/He sent him the book.*
 - B. Transitive verb (not allowing the dative movement transformation): e.g., *They described the book to her.*
 - C. Transitive verb + for (allowing the dative movement transformation): e.g., *She bought a shirt for him/She bought him a shirt.*
 - D. verb + specific preposition: e.g., *adhere to*
 - E. verb + to (infinitive): e.g., *begin to, decide to*
 - F. Verb + infinitive without to: e.g., *would rather*
 - G. Verb + gerund: e.g., *keep*
 - H. Transitive verb + object + to (infinitive): e.g., *We forced them to leave.*
 - I. Transitive verb + D.O. + infinitive without to: e.g., *She heard them leave.*
 - J. Verb + object + gerund: e.g., *I caught them stealing apples.*
 - K. Verb + possessive (pron./noun) + gerund: e.g., *Please excuse my*

- being late.*
- L. Verb + noun clause (that): e.g., They *admitted that they were wrong.*
 - M. Transitive verb + D.O. + to be /(adj.) or (P.P.) (N): e.g., We *considered him to be* a wise boy.
 - N. Transitive verb +D.O. + adj./(P.P.) + (N) + (Pron.): e.g., She *dyed her hair red.*
 - O. Transitive verb + two objects: e.g., The teacher *asked the pupil a question.*
 - P. Intransitive verb, reflexive, and transitive + Adverbial (Adv., P.P., NP, and clause): e.g., He *carried himself.*
 - Q. Verb + interrogative word: e.g., how, what, when
 - R. It + Transitive verb + (to + infinitive) + (that clause): e.g., It *puzzled me that they never answered.*
 - S. Intransitive verb + predicate noun or adjective: e.g., He *became an engineer.*

Following Benson et al. (1997), seven combinations of lexical collocations were considered in the study. They are designated by G1, G2, and so on.

- G1. Verb (creation/activation) + noun: e.g., She *does the laundry* everyday.
- G2. Verb (eradication/nullification) + noun: e.g., The teacher *declined* our invitation.
- G3. Adjective + noun/noun + noun: e.g., The room has a *sour smell.*
- G4. Noun + verb (action): e.g., *Bombs exploded* across Bangladesh.
- G5. Noun (unit) + of + noun: e.g., David gave Elisa a *bouquet of flowers.*
- G6. Adverb + adjective: e.g., They are *closely acquainted.*
- G7. Verb + adverb: e.g., They *argued heatedly* in that debate.

Both *English Book 1* and *New Interchange Intro* are for absolute beginners and learners needing a thorough review of basic structures and vocabulary. That is why the data obtained from the above textbooks were compared in this study. *English Book 2* and *New Interchange 1* are for beginners; both are supposed to take students from beginning to low-intermediate levels. That is why the data obtained from them were compared in this study. Both *English Book 3* and *New Interchange 2* are for intermediate students; they are

supposed to take them from low-intermediate up to intermediate level. That is why the data obtained from the above textbooks were compared. The pre-university English and *New Interchange 3* textbooks are for intermediate students; both are supposed to take students from intermediate level up to high-intermediate level. That is why the data obtained from them were compared in this study.

The frequencies of both types of collocations in the corpora were obtained by a graduate TEFL student who was also an EFL teacher. In order to make sure that the data were reliable, another EFL teacher, who also had adequate knowledge about the Benson et al.'s (1997) classification of lexical and grammatical collocations, was asked to code the type of collocations and obtain the frequencies of the lexical and grammatical collocations in the aforementioned textbooks. The interrater reliabilities for coding the type of collocations in the corpora were all found to be above .93, which was high. However, the two raters were invited back to discuss their disagreements and discrepancies, using dictionaries such as *Oxford Collocations Dictionary* (McIntosh, Francis, & Poole, 2009) as a reference, so that a consensus between them would be reached.

In the second stage, the collocation tests were developed. The newly-developed test items were based on the content of the above textbooks. They comprised both types of lexical and grammatical collocations. The validity of the tests was confirmed by the expert judgments, including one professor of TEFL and two experienced EFL teachers. By investigating the test specifications such as test method, scoring matrix, choice distribution of items, and selections of test items, they confirmed the content validity of the collocation tests. Then, they were piloted on 10 participants who were similar to the main participants of this study to check the wordings, instructions, timing, and scoring procedure.

Before the tests were administered to the participants in the main trial, the groups of participants (i.e., those who were studying the high school and pre-university textbooks and those who were studying the *Interchange* book series) were matched in terms of their L2 proficiency. A proficiency

placement test, developed by Lesley, Hansen, and Zukowski/Faust (2005), was given to the participants. The test included 20 multiple-choice listening, 20 multiple-choice reading, and 30 multiple-choice language use items. Following the guidelines provided by Lesley et al. (2005), the group of students who were studying *English Book 1* ($n = 20$) and the group who were studying *New Interchange Into* ($n = 20$) and whose proficiency score had been between 1 and 11 were matched in terms of proficiency; the group who were studying *English Book 2* ($n = 20$) and the one who were studying *New Interchange 1* ($n = 20$) and whose proficiency score had been between 12 and 23 were matched; the group who were studying *English Book 3* ($n = 20$) and the one who were studying *New Interchange 2* ($n = 20$) and whose proficiency score had been between 24 and 36 were matched; the group who were studying the pre-university English textbook ($n = 40$) and the one who were studying the *New Interchange 3* textbook ($n = 40$) and whose proficiency score had been between 37 and 49 were matched to compare their performance on the collocation tests.

Then, the collocation tests were administered as the pretests to the groups of participants at the beginning of the academic semesters in 2010. The tests used in the main trials all consisted of 30 multiple-choice items for each of the textbooks except the collocation test for the pre-university English and *New Interchange 3* textbooks, which consisted of 40 multiple-choice items. Meanwhile, the reliability of the pretests was determined by the use of Cronbach alpha through the SPSS. The findings showed that the alpha was above 0.75 for all the collocation tests, which is commensurate with the requirements for the reliable scoring by Larson-Hall (2010, p. 171). Finally, the collocation tests were administered as the posttests to the same groups of participants almost at the end of the semesters and the collected data were submitted to the SPSS (version 17) for the analysis.

RESULTS

To answer the first research questions of the study, stating that to what extent the lexical and grammatical collocations are used in high school and pre-university English textbooks in comparison with the *Interchange* book series, the frequencies, proportions, and percentages of both lexical and grammatical collocations in the two types of textbooks were obtained. The results are reported in Table 1. In this study, the proportion was defined as the number of collocations divided by the total number of words in the corpus (i.e., 7000 word), and the percentage is defined as the proportion multiplied by 100.

TABLE 1
Frequency, Proportion, and Percentage of Collocation Use in
the Textbooks

Book	Lexical			Grammatical			Total
	<i>N</i>	<i>P</i>	%	<i>N</i>	<i>P</i>	%	
<i>Book 1</i>	20	.0028	.28	20	.0028	.28	40
<i>Intro</i>	25	.0036	.36	20	.0028	.28	45
<i>Book 2</i>	24	.0034	.34	20	.0028	.28	44
<i>Interchange 1</i>	35	.005	.50	20	.0028	.28	55
<i>Book 3</i>	20	.0028	.28	22	.0031	.31	42
<i>Interchange 2</i>	23	.0032	.32	25	.0036	.36	48
<i>Pre-university</i>	37	.0052	.52	20	.0028	.28	57
<i>Interchange 3</i>	35	.005	.50	25	.0036	.36	60

As Table 1 displays, the number of lexical collocations in *English Book 1* was 20 (about 45% of the total lexical collocations) and that of *New Interchange Intro* was 25 (about 55% of the total lexical collocations). According to the table, the proportion and percentage of the lexical collocations in the *New Interchange Intro* textbook (.0036 and .36%, respectively) were higher than the proportion and percentage of the lexical collocations in *English Book 1* (.0028 and .28%, respectively), but the proportion and percentage of the grammatical collocations were the same in the two textbooks (.0028 and .28%, respectively). Also, the percentage of the

lexical collocations in *Interchange 1* (.50%) was higher than *English Book 2* (.34%), but the percentage figure of the grammatical collocations was the same (.28%). As to *English Book 3* and *New Interchange 2*, the percentage of both lexical and grammatical collocations used in *New Interchange 2* was higher (.32% and .36%, respectively). Also, the comparison of the pre-university English and *New Interchange 3* textbooks in terms of the proportion and percentage of the collocations shows that the *New Interchange* textbook enjoyed a higher proportion and percentage of the grammatical collocation use (.0036 and .36%, respectively), but a lower proportion and percentage of lexical collocation use (.005 and .50%, respectively).

To answer the second research question of the study, stating that whether there is a significant difference in the frequency of collocations between the high school and pre-university English textbooks, on the one hand, and the *New Interchange* book series, on the other hand, chi-square tests of significance were conducted on the raw frequencies of collocations, given that the total number of words in the corpus obtained from each textbook was the same. When the frequencies of lexical and grammatical collocations in *English Book 1* and *New Interchange Intro* were compared, the chi-square statistical value was not found to be significant ($\chi^2 = .262$, $df = 1$, $p = .609$). In the same manner, the statistical values were not found to be significant when the chi-square tests were done on the frequencies of the lexical and grammatical collocations between *English Book 2* and *New Interchange 1* ($\chi^2 = .0839$, $df = 1$, $p = .360$), *English Book 3* and *New Interchange 2* ($\chi^2 = 0.001$, $df = 1$, $p = .978$), and the pre-university English and *New Interchange 3* textbooks ($\chi^2 = 0.535$, $df = 1$, $p = .465$).

In order to answer the third research question of the study, stating that whether the EFL students who study high school and pre-university English textbooks and those who study the *New Interchange* book series differ significantly in the performance on the textbook-based collocation tests, *t* tests were conducted. The *t* test conducted on the collocation pretest scores of those who were studying *English Book 1* and those who were studying *New*

Interchange Intro showed no significance difference between the mean scores of the two groups ($t(38) = 1.60, p > .05$). In other words, the two groups were not significantly different in the pretest scores. However, when a t test was conducted on the posttest scores, the results were different. Table 2 shows the results of the t test between the collocation posttest scores of those who were studying *English Book 1* and those who were studying *New Interchange Intro*. As Table 2 demonstrates, the mean score of the group who were studying the *New Interchange Intro* textbook was much greater ($M = 22.60$), so the t value was found to be significant ($t(23.5) = 11.6, *p \leq .05$). Meanwhile, because the variance between two groups was not found to be equal in the t test, the statistical t value for unequal variance is reported in Table 2.

TABLE 2
Independent t Test Between the Collocation Posttest Mean Scores of Those Studying English Book 1 and Those Studying New Interchange Intro

Group	N	M	St. dev.	T	df	Sig.
<i>Book 1</i>	20	10.4	4.43	-11.6	23.5	.000
<i>Intro</i>	20	22.6	1.53			

A t test was conducted on the collocation pretest scores of those who were studying *English Book 2* and those who were studying *New Interchange 1*. The results indicated no significant difference between the mean scores of the two groups ($t(38) = 1.40, p > .05$). However, the results were not found to be the same when another t test was conducted on the collocation posttest scores of the two groups. Table 3 shows the results of the t test between the collocations posttest scores of those who were studying *English Book 2* and those who were studying *New Interchange 1*. As Table 3 demonstrates, the mean score of the group who were studying the *New Interchange 1* textbook was greater ($M = 22.05$) and the t value was found to be significant ($t(38) = 11.80, *p \leq .05$). Therefore, there was a significant difference between the two groups in the posttest scores.

TABLE 3
Independent *t* Test Between the Collocation Posttest Mean Scores of Those Studying English Book 2 and Those Studying New Interchange 1

Group	<i>N</i>	<i>M</i>	St. dev.	<i>T</i>	<i>df</i>	Sig.
<i>Book 1</i>	20	10.25	3.14	-11.80	38	.001
<i>Intro</i>	20	22.05	3.62			

In order to see whether those who were studying *English Book 3* and those who were studying *New Interchange 2* differed in terms of the collocation pretest scores, a *t* test was conducted. The results indicated no significant difference ($t(38) = 1.57, p > .05$). However, a significant difference was found when another *t* test was conducted on the collocation posttest scores of the two groups. Table 4 shows the results of the *t* test between the collocations posttest scores of those who were studying *English Book 3* and those who were studying *New Interchange 2*. As Table 4 demonstrates, the mean score of the group who were studying the *New Interchange 2* textbook was greater ($M = 22.35$) and the *t* value was found to be significant ($t(38) = 12.50, *p \leq .05$).

TABLE 4
Independent *t* test Between the Collocation Posttest Mean Scores of Those Studying English Book 3, and Those Studying New Interchange 2

Group	<i>N</i>	<i>M</i>	St. dev.	<i>T</i>	<i>df</i>	Sig.
<i>Book 1</i>	20	10.25	2.88	-12.50	38	.001
<i>Intro</i>	20	22.35	3.23			

In order to see whether those who were studying the pre-university English textbook and those who were studying the *New Interchange 3* textbook differed in terms of collocation pretest scores, a *t* test was conducted. The results indicated no significant difference ($t(78) = 1.17, p > .05$). However, a significant difference was found when another *t* test was conducted on the collocation posttest scores of the two groups. Table 5 shows the results of the *t* test between the collocations scores of those who were studying the pre-university English and those who were studying the *New Interchange 3* textbook. As Table 5 demonstrates, the mean score of the group who were

studying the *New Interchange 3* textbook was greater ($M = 22.08$) and the t value was significant ($t(78) = 11.66$, $*p \leq .05$). Therefore, there was a significant difference between the two groups.

TABLE 5
Independent t test Between the Collocation Posttest Mean Scores of Those Studying the Pre-university English Textbook, and Those Studying the New Interchange 3 Textbook

Group	N	M	St. dev.	T	df	Sig.
<i>Pre-university</i>	40	13.15	4.05	-11.66	78	.000
<i>Interchange 3</i>	40	22.08	2.65			

DISCUSSION AND IMPLICATIONS

The data displayed in Table 1 demonstrated that the proportions of collocation use were not very high in the instructional textbooks. Besides, collocations, in general, were relatively fewer in the high school and pre-university English textbooks in comparison with the *New Interchange* book series. The only exception was the pre-university English textbook in which the proportion of the lexical collocations was higher than that of the *New Interchange 3* textbook. The *New Interchange 2* and *New Interchange 3* textbooks enjoyed a higher proportion of grammatical and lexical collocations than the high school and pre-university English textbooks. Also, the *New Interchange Intro* and *New Interchange 1* textbooks enjoyed a higher proportion of lexical collocations than the high school English textbooks (i.e., *English Book 1* and *English Book 2*), but they did not differ in terms of grammatical collocations. When the tests of significance were run on the frequencies of both types of collocations between the two types of textbooks (i.e., those taught in public schools and those taught in private language institutes in Iran), none of the differences were found to be significant, indicating that the frequency of both lexical and grammatical collocation use in the two types of instructional textbooks were not

significantly different. Thus, the first null hypothesis of the study is rejected.

The above findings suggest that, despite the fact that collocations outnumbered, to some extent, in the *New Interchange* book series, compared with the high school and pre-university English textbooks, the textbook writers, in general, have not paid much attention to the collocation use in their materials. Given the low proportion of collocations, particularly the lexical ones, in the aforementioned instructional textbooks, materials developers should reconsider the choice of materials, particularly the texts selected for reading. This issue becomes more critical on the part of Iranian writers of English textbooks. L2 teachers and materials developers should keep in mind that lexical collocations make discourse authentic. Collocations help EFL learners to produce the L2 in a natural and accurate way. They help L2 learners to look for authentic patterns of use. As Lewis (2000) points out, usage of collocation determines precision and pertinence of the speech. In addition, collocational competence enables students to produce texts which not only are grammatically correct or merely hypothetical but also authentic. Iranian EFL students at high and pre-university schools often have poor mastery of collocations because, as Ying and Hendricks (2004) suggest, collocations are so difficult for a language learner to learn and for a language teacher to teach. In addition, as Gabriellatos (1994) states, collocations are an area that resists intuition and requires systematic attention. L2 teachers and materials writers should observe that collocations sometimes provide more practical and precise instructions than general grammar rules. The collocational patterns exemplify some variants which grammar rules do not embrace. For instance, the uncountable noun *weather* can appear in the collocation *out in all weathers* in plural forms, which is indicative of the usage of collocations. Therefore, the results of this study suggest that one criterion for the selection of textbooks can be the degree of attention materials developers pay to the collocation use.

On the performance of EFL students on the collocation tests, the difference between those studying high school and pre-university English textbooks and those studying the *New Interchange* series was found to be significant. The

results indicated that the two groups of students were not significantly different in the collocation pretest mean scores, but they demonstrated significant differences in the collocation posttest scores; the groups of EFL students studying the *New Interchange* book series had a significantly better performance in terms of collocation use. Thereby, the second and third null hypotheses of this study are rejected. The descriptive data on the frequency, proportion, and percentage of collocations in Table 1 also support the above findings, highlighting the poor performance of high school and pre-university EFL students on the collocation use. One possibility for the poor performance of students studying high school and pre-university English textbooks is that these textbooks contain a low proportion of collocations, particularly lexical ones. Perhaps, the writers of these instructional textbooks, who are not native speakers of English, have not paid considerable attention to the collocation use in their textbooks. The other possibility is that the EFL teachers teaching these instructional textbooks at high and pre-university schools do not address lexical and grammatical collocations adequately partly because less emphasis is given to them in their syllabuses.

The EFL teachers might not invest on, to use Hill's (1999) terms, their students' 'collocational competence.' It is natural that when EFL students do not have ready-made chunks at their disposal, they have to generate them from scratch on the basis of grammar rules. This can result in numerous mistakes, which lead to a weaker performance on collocation use. Language production, according to Nattinger (1980), is based on piecing together ready-made units appropriate for a particular situation. Comprehension of such units depends on knowing the patterns to predict in different contexts. That is why a learner should be instructed how and in what cases those units can be integrated. It is unfortunate that in the high and pre-university schools in Iran, EFL teachers emphasize single words, and students typically make an alphabetized list of new L2 words with their L1 translations, and study them before a summative examination. What is missing is teachers' investment on techniques to develop collocational competence. As Yuan and Lin (2001) suggest, sometimes word collocability should replace single-word vocabulary

instruction. Highlighting and classifying collocations, making a bilingual list of collocations and teaching them explicitly through tasks and contextualized exercises in textbooks can be of great aid to EFL learners. In support of this suggestion, Chan and Liou's (2005) study has showed that direct collocation instruction has positive effects on learners' collocation learning. Therefore, raising EFL learners' awareness of word collocability by L2 teachers and material writers, as Hill, Lewis and Lewis (2000) have stressed, is so important and this might be one reason why the *New Interchange* series, taught in many language institutes, have been more promising in terms of the collocation use than the other instructional textbooks taught in public schools in Iran.

CONCLUSION

The advocates of the lexical approach argue that language consists of meaningful chunks that, when combined, produce a continuous coherent text. Collocations being a category of such chunks are called 'multi-word' items, which play a crucial role in developing language proficiency and learning a foreign language (Lewis, 1994). In light of this view, attempts were made in this study to explore the comparative use of collocations in two types of commonly used instructional textbooks in Iran, that is, the high school and pre-university English textbooks, produced by the Ministry of Education and taught in public schools, versus the *New Interchange* book series, internationally produced and taught in many private language institutes; it is believed that many Iranian EFL students rely on the instructional textbooks as a resource and syllabus. The results of this study indicated lower proportions of lexical and grammatical collocations in the aforementioned textbooks. Yet, the proportions of lexical and grammatical collocations in the *New Interchange* book series were generally higher than the proportions of collocations in the high school English textbooks. Besides, the EFL students studying the instructional textbooks in the public schools showed a weaker

performance on the collocation tests than those studying the *New Interchange* book series. By implication, both types of the textbooks should make collocation use more salient by recycling them in the syllabus and including them in the supplementary materials in the form of collocation grids, glossary and tests. Needless to say, the findings obtained in this study should not be interpreted and generalized wildly as this study has failed to use a standardized collocation test. Besides, the content analysis in this study was limited to small corpora, each of which included 7000 words from each of the above textbooks, excluding the supplementary materials such as the workbooks and video materials. What this study hopes to achieve is to make the role of collocations more salient to EFL teachers and material developers and stimulate further research with larger corpora.

THE AUTHOR

Ali Roohani is Assistant Professor of Teaching English as a Foreign Language (TEFL) in the Department of English at Shahrekord University in Iran. His research interests are primarily associated with collocations, language learning strategies, multiple intelligence and affective variables in L2 learning.

Email: roohani.ali@gmail.com

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